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Scrap Book

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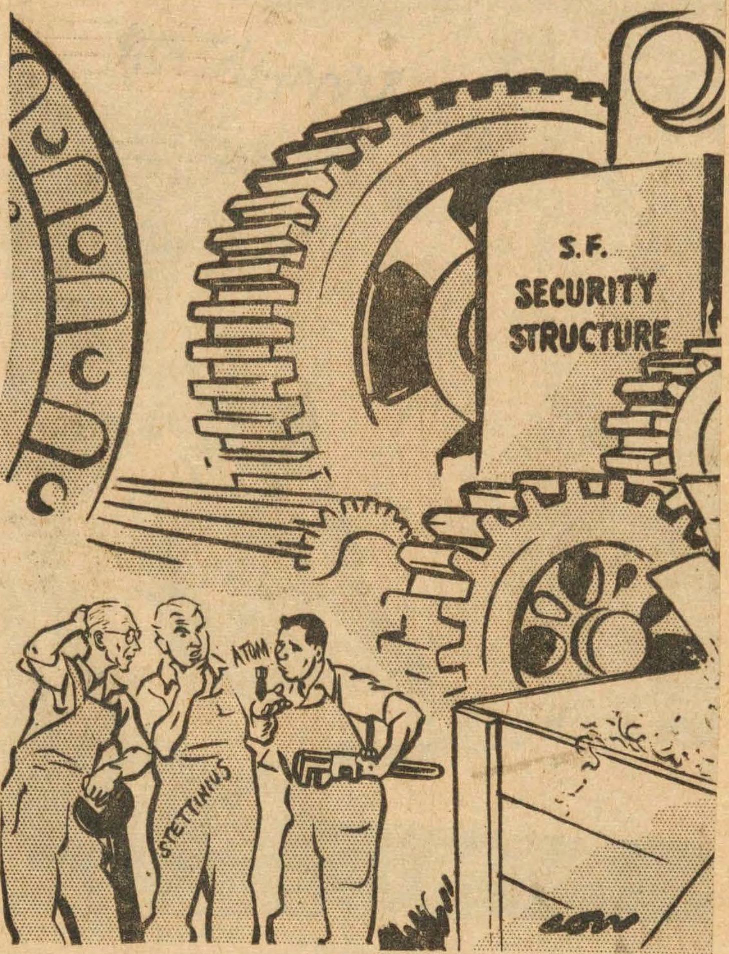
"——AND WHERE DOES THIS BIT FIT?"



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American Broadcasting Co

RAYMOND SWING'S BROADCAST

Friday, September 7, 1945

In Berlin, back in the early 1920's, I came upon something I thought the most irrational conduct I could well imagine. It was a mass meeting, held in the hall of the Philharmonic, to protest against the theory of relativity of Dr. Albert Einstein. The meeting was crowded, and, as I recall it, was addressed by at least one fairly reputable scientist. The purpose of the meeting, of course, was anti-semitic, and the intention was to disparge the scientific work which had already won world-wide notice and acclaim for Dr. Einstein. I simply could not understand how anyone in his right mind hoped to prove that the theory of relativity was wrong by declaiming against it in a mass meeting.

As early as 1905, Dr. Einstein clearly stated that mass and energy are equivalent. He also stated that this equivalence might be found by the study of radioactive substances. He set down his formula, E equals mc^2, perhaps the most startling and far-reaching assertion of its kind ever made. For it says that energy is the equivalent of mass, multiplied by the square of the speed of light. To put this statement into numbers, and quoting the Smyth report, one kilogram of matter -- just over two pounds -- if converted into energy, would give 25,000,000,000 kilowatt hours of energy, or as much as is generated in nearly two months by the entire electric power equipment of the United States. So scientists have been familiar with this concept for a long time. Some of them accepted it as probably true, but undemonstrable. Some dared to believe that one day atomic energy would be unlocked and give man the use of power beyond his most fantastic dreams, since he then could wield the basic power of the universe itself.

I am not going into the history of the development of atomic research. I do wish it could be made simple and could be grasped by everyone. For unless the mind fathoms at least a little of the depths of meaning of man using atomic power, there can be no wise political action which makes that use safe and beneficial.

HISTORY OF ATOMIC BOMB

But tonight I am going to tell a little of the history of the development of the atomic bomb which has not been more than referred to in the government release on the project.

It brings me once more to the name of Dr. Einstein. The mass meeting in the Philharmonic in Berlin had not affected the theory of relativity, but the organized bigotry behind it had led the great physicist and mathematician to go abroad, and finally to take up his home at Princeton. And there, on August 2, 1939, just a month before the outbreak of World War II, he wrote a remarkable letter. It is not as remarkable as that formula that E equals mc^2. But it is the letter that approximately led to the development of the atomic bomb and the demonstration of the validity of the formula. So it was a step to the expansion into another dimension of the power available to the human race.

This letter was addressed to "F.D. Roosevelt, President of the United States, White House, Washington." It starts with the sentence: "Some recent work by B. Fermi and L. Szilard, which has been communicated to me in manuscript, leads me to expect the element uranium may be turned into a new and important source of energy in the immediate future."

ALEXANDER SACHS VISITS ROOSEVELT

It happens that this letter did not reach President Roosevelt until after the outbreak of war. It was not posted to him. It was taken to him, along with scientific memoranda and data, by Alexander Sachs, of New York City. Mr. Sachs is one of the most brilliant of living economists. He also is a noted student of world affairs, and one of the most brilliant analysts of them. And he is a friend of Dr. Einstein. Both he and Dr. Einstein believed in August, 1939, that catastrophe hung over the human race, and that in the course of that catastrophe atomic energy would have a part. They felt they must bring the latest news of atomic research to the knowledge of the President in the cause of national defense.

Let me quote another passage from Dr. Einstein's letter to President Roosevelt. "In the course of the last four months it has been made probable," he stated, through the work of Joliot in France, as well as Fermi and Szilard in America, that it may become possible to set up a nuclear chain reaction in a large mass of uranium, by which vast amounts of power and large quantities of new radium-like elements would be generated. Now it appears almost certain that this would be achieved in the immediate future." Dr. Einstein went on: "This new phenomenon would also lead to the construction of bombs, and it is conceivable -- though much less certain -- that extremely powerful bombs of a new type may thus be constructed. A single bomb of this type, carried by boat and exploded in a port, might very well destroy the whole port, together with some of the surrounding territory. However, such bombs might very well prove to be too heavy for transportation by air."

This was a few months after Hitler had seized Prague, and Dr. Einstein told the President that Hitler thereupon had stopped the sale of uranium from the Czechoslovakian mines. This action, he suggested, was linked with the fact that the son of the German Secretary of State von Weizaecker was attached to the Kaiser Wilhelm Institute in Berlin, where some of the American work on uranium was at that time being repeated. Dr. Einstein recommended that the President appoint someone on his behalf to keep government departments informed of developments, who also could give attention to obtaining a supply of uranium for the United States, and that experimental work in this country should be speeded up.

With the material Mr. Sachs took took to President Roosevelt on October 11th, 1939, was a memorandum by the physicist Szilard, one of the men whose work at Columbia had brought uranium research to the brink of culmination. His statement reported that investigations so far had been limited to chain reactions based on the action of slow neutrons. "At present," he said, "it is an open question whether such a chain reaction can also be made to work with the fast neutrons which are not slowed down. There is reason to believe," he continued, "that if fast neutrons could be used, it would be easy to construct extremely dangerous bombs. The destructive power of these bombs can only be roughly estimated, but there is no doubt that it would go far beyond all military conceptions." I hardly need to interpolate that the fast reactions were made to work, which is the secret of the atomic bomb as it finally was used.

BRIGGS COMMITTEE SET UP

To his everlasting credit, President Roosevelt grasped fully what he was told, instructed his aide, General Watson, to act as liaison in the matter, and asked Dr. Lyman Briggs of the Bureau of Standards to constitute a committee of the armed services, a committee on which Mr. Sachs served as representing the President.

There were tedious delays before the atomic project was to be turned over to the entirely new National Research Committee under Dr. Vannevar Bush, which brought the bomb to reality. Of the several physicists consulted, some were anything but sanguine of success. Dr. Einstein and Professor Szilard were the ones most outspokenly confident that results could be achieved. A preliminary experiment at Columbia had to be waited for. It was on a small scale, but it turned out astonishingly favorably, so the Briggs Committee was able to recommend further action. But, in the meantime, priceless months were dribbling away, and the Germans were working with all scientists available to them on uranium.

Our Navy Department put up $6,000 to buy some materials. And another memorandum about atomic power by Professor Szilard spoke of the possibility of driving battleships with atomic engines. If only slow neutrons were utilized, a ton of uranium, he said, would equal 3,000 tons of oil; if the fast neutrons could be utilized, one ton of uranium would equal 300,000 tons of oil. A battleship with such a reserve of energy could stay away from fuel resources almost indefinitely.

On March 7th, 1940, Dr. Einstein felt the need for greater haste. This was during the "Phoney War" period, with the invasion of the western democracies imminent. "Since the outbreak of the war," he wrote, "interest in uranium has intensified in Germany. I have now learned that research there is being carried out in great secrecy and that it has been extended to another of the Kaiser Wilhelm institutes, the Institute of Physics." Dr. Einstein spoke of the need to keep scientists in the democracies from publishing their work on setting up a chain reaction in uranium. Dr. Szilard himself had written up a method for setting up the chain reaction. Later the effort was made to have the physicists in the democracies withhold their work from publication, so as to keep news of it from the Germans. The British agreed, but because one manuscript already had been inadvertently published, the French balked. Later, of course, this research became the top secret of all top secrets.

PROJECT EXPANDS

The war itself was to bring pressure on the project at this stage. By April 27th, after the invasion of Norway, the Briggs Committee was ready to recommend further action, as the doubtful Thomases among its members became much less doubtful. On May 10th, the very day of the German invasion of Holland, Belgium and France, the four chief Columbia University scientists, Fermi, Szilard, Pegram and Urey, were ready to plump up for a large-scale experiment, that would cost anything up to half a million dollars.

And so it became clear that a bigger and better functioning organization was needed to take the place of the modest Briggs Committee. Mr. Sachs recommended his views to the President, and that was the genesis of the National Research Defense Committee under Vannevar Bush, which handled the $2,000,000,000 and produced the atomic bomb. Naturally what this committee accomplished is the main part of the story. But before this could be done there had to be a chain of actions, which in the field of government can be as difficult to assure as in treating the atoms of uranium. Genius, friendship, and patriotism, and in the President, the intelligence to know what it all could mean, had to combine to get the most original of all government projects under way.

To come back to that anti-Einstein mass meeting in Berlin, indirectly it served this country, fabulously, as did the tyranny in Germany and Italy, in bringing us the services of great scientists whose joint efforts produced the release of atomic energy.

Boston Globe 9/7

Atom Scientists Protest U. S. Use of Weapon

By Dorothy Thompson

TO my mind one of the most important news stories of the week was a report from Chicago of a luncheon attended by 17 scientists who worked on creating the atomic bomb, and who expressed, in no uncertain terms, their indignation at the "tragic use" made of the new discovery, and the treatment they themselves have since been accorded.

If anyone has a right to advise on the use of atomic bomb and has the power to back such advice, it is the scientists who are responsible for the greatest discovery in history.

They know its potentialities, for infinite disaster or infinite good. They have power, because without them secrecy cannot indefinitely be kept; and, secondly, progress in this science is unlikely without them.

At this stage, the pure theoretician is still essential; atomic science still needs the Galileos and Einsteins. There are only a handful of men in the world, who really, basically, understand nuclear physics.

One of them is Dr. Samuel Allison, head of the Institute of Nuclear Studies at the University of Chicago, and one of the men in charge of the first atomic bomb experiment in New Mexico. Speaking for all 17 of his colleagues at the luncheon—they included two Nobel Prize winners, Harold C. Urey and Enrico Fermi—Dr. Allison said that all considered it a "great tragedy" that so important a discovery should be revealed under such circumstances; that they had hoped that by merely demonstrating the bomb on an unoccupied island or in Japanese home waters, the war could have been ended.

Dr. Allison vigorously criticised the dropping of the second bomb on Nagasaki, and he made a strong plea that further experimentation with atomic science be undertaken, with a view to putting it creatively to work for the welfare of mankind, suggesting "some city be created or taken over for the sole purpose of conducting these experiments on a life-size scale" —the experiment being to heat and operate an entire area by atomic energy.

* * *

Dr. Allison also protested a situation in which the atomic scientists have become virtual prisoners, at a time when they are "making a desperate attempt to return to free research and investigation, as it was before the experiment began. . . . We have been virtually locked up ever since."

He threatened that "if attempts are made to continue censorship and prevent free dissemination of scientific knowledge," the scientists would, in effect, go on strike. "We will begin an elaborate study of the colors of butterflies," he remarked.

He said that, among nuclear scientists everywhere "there is no real secret about the atomic bomb. Our only secret is the capacity of the bomb."

The 17 scientists in Chicago were not the first to utter a protest. On Aug. 22, Lise Meitner, remarkable woman scientists and exile from Berlin, who played a decisive role in the whole development, wrote a short article, which was cabled from Stockholm, where she has done her work.

She said, "When the original research began before the war nothing was farther from our minds than the utilization of this energy for the manufacture of bombs. When the theoretical possibility of such utilization was discovered, I, like any other responsible person, hoped that its practical realization would not be possible. . . . The scientist is ever awestruck at the discovery of the laws of nature, and to use these laws for the construction of weapons which might lead to the annihilation of mankind is blasphemy to him. May the first two atom bombs to have been dropped also be the last ones. . . . The energy liberated must find application to raise the prosperity of all nations." . . .

* * *

A revolt of scientists is serious for political and military leaders. Science has always been international, except in times of actual warfare. Scientists are looking for natural truths, and these have no nationality. If a state wants to monopolize such scientific discoveries as that of uranium fission, it must first cut the international ties of science, and, second, abolish all constitutional freedoms for scientists.

There may be those who think that is not too high a price for power—but they won't get or increase power that way. For the best scientists won't work in chains. The proof of that is that the greatest atomic scientists are in this country, because they love —and need—freedom.

Scientists should be encouraged to speak. They should be encouraged to tell us, with complete candor, what the results are likely to be of dropping atomic bombs around on land and sea. And at least a fraction of the money spent to discover the bomb should immediately be invested to continue research into its creative possibilities.

The task of the statesmen, or politicians, should be exclusively restricted to eliminating forever its use for war.

NYT 9/5

Visit to Hiroshima Proves It World's Most-Damaged City

Four Square Miles Leveled by the Atomic Bomb—People Reported Dying at Rate of 100 a Day—Hate for Us Shown

By W. H. LAWRENCE

By Wireless to THE NEW YORK TIMES.

HIROSHIMA, Japan, Sept. 3 (Delayed)—The atomic bomb still is killing Japanese at a rate of 100 daily in flattened, rubble-strewn Hiroshima, where the secret weapon harnessing the power of the universe itself as a destructive agent was used for the first time on Aug. 6.

I was among the first few foreigners to reach the site of this historic bombing and walked for nearly two hours today through streets where the stench of death still pervades and survivors or relatives of the dead, wearing gauze patches over their mouths, still probe among the ruins for bodies or possessions.

This is the world's most damaged city, worse than Warsaw or Stalingrad, which held the record in Europe. Fully four square miles, constituting 60 per cent of the city, are absolutely levelled and the houses and buildings in the rest of the city are irreparably damaged.

Japanese announced that the death toll had passed 53,000, an increase of 20,000 in the figure reported Aug. 20 and last Saturday, and it was predicted the final count would exceed 80,000 dead.

On Aug. 20, the latest date for which Japanese official detailed statistics are available, the casualties were 33,000 dead, 30,000 missing, 13,960 seriously wounded and 43,500 listed as wounded "not so seriously."

This accounted for approximately one-third of Hiroshima's prewar population of 343,000, but in addition it was stated that most of the other persons in the city suffered minor wounds that were not considered serious enough for medical treatment in view of the great shortage of doctors to deal with this disaster.

Japanese doctors told us they were helpless to deal with burns caused by the bomb's great flash

Continued on Page 4, Column 3

Scientists Fear Atom Bomb Race

By the Associated Press. WT 9/10

CHICAGO, Sept. 10.—Secrecy regarding the atomic bomb will be only a temporary safeguard and may initiate a secret armament race, 65 University of Chicago professors and scientists decided today, and sought to have President Truman obtain a mutual sharing of information among the United Nations to avert such a conclusion.

In a petition addressed to the President, the professors asserted "the atomic bomb accentuates an already desperate need for world unification."

Atomic Bomb Secret Won't Keep, U. S. Told

By the Associated Press. WT 9/10

WASHINGTON, Sept. 10. — A soldier-turned-lawmaker said today the secret of the atomic bomb should be passed on to the World Security Council to strengthen its hand in maintaining peace.

Rep. John E. Lyle (D., Tex.), who was elected to Congress while fighting the Nazis, disagrees with Sen. Tom Connally (D., Tex.) on that matter. Mr. Connally, chairman of the Senate Foreign Relations Committee, said Saturday he thought the United States should retain the secret but provide the security council with bombs and an adequate air force.

"We would be stupid to think we could keep this secret to ourselves," Mr. Lyle said. "It is inevitable that other nations will work out the answer. [illegible] no monopoly on scient

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British Bar Baring Atom Bomb Secret

By the United Press. WT 9/10

LONDON, Sept. 10.—Great Britain took a firm stand today against any discussion of the future control of the atomic bomb at the Big Five Council of Foreign Ministers opening here tomorrow.

Foreign Commissar V. M. Molotov of Russia arrived by plane today for the meeting of the Council established at Potsdam to set the course toward the final peace settlements and maintain liaison among the United Nations governments.

Mr. Molotov arranged a preconference meeting with British Foreign Minister Ernest Bevin for tomorrow morning. Mr. Bevin was seeing Georges Bidault of France and Wang Shih Chieh of China later today. Secretary of State James F. Byrnes was due at Southampton on the Queen Elizabeth in time for the first formal session tomorrow.

An official British spokesman revealed Britain's opposition to taking up the future of the atomic bomb at the conference. He expressed surprise at a London Star dispatch saying that Russia, France and China would present a request to share the atomic secret when the council opened.

VISIT TO HIROSHIMA SHOWS VAST RUIN

Continued From Page 1

or with the other physical ailments caused by the bomb. Some said they thought that all who had been in Hiroshima that day would die as a result of the bomb's lingering effects.

They told us that persons who had been only slightly injured on the day of the blast lost 86 per cent of their white blood corpuscles, developed temperatures of 104 degrees Fahrenheit, their hair began to drop out, they lost their appetites, vomited blood and finally died.

The bomb fell about 8:15 A. M. on a clear day, just after the "all clear" signal ending an air raid alert had been sounded, and many of Hiroshima's residents were in the streets when the sky above them was lighted by a brilliant flash that seared everything below it.

Most of the deaths and destruction occurred in a fraction of a second, although fires smoldered for more than a day in the ruins of wooden and stone houses crumpled inward. Bodies of men, women and children were thrown about the streets and the cries of the terrified wounded filled the air.

A witness of the bombing said "everything had been scorched to the ground, everything that still lived was waiting to die."

So terrible was the blast that every wounded person thought he had been hit by an individual bomb, and it was not until hours later that it was recognized that a new weapon of undreamed of power had been utilized against them.

We were told that the bomb descended by parachute from three Superfortresses and had exploded about 150 feet above the ground.

While the Japanese still are staggered by the initial impact of this weapon and its lingering effects, their scientists still have not figured out whether the blast will have continuing harmful effects upon all who live in Hiroshima. They already have banned the drinking of city water because of chemical changes caused by the radioactive rays of the bomb, and they asked us whether we thought residing in the bombed area would be harmful.

U. S. Scientists Plan Study

We told them that we did not know but that a party of American scientists, who had worked on development of the bomb, soon would come to Hiroshima to study its effects and to make recommendations.

[American atomic bomb experts have arrived in Japan to check the effects of the bombs on Hiroshima and Nagasaki, an American Broadcasting Company correspondent reported Tuesday from Japan. He quoted one of the experts as saying that "effects of the bomb could well disintegrate the white corpuscles in the human blood stream," but that Japanese reports that emanations from the bombed area damaged the health of visitors three weeks later might be exaggerated.]

Of Hiroshima's pre-war population of 343,000 we were told that about 120,000 lived in the rubble of the city and its suburbs. Most of these have suffered injuries and it has been noted that those who spent more than a few hours in the bombed area daily suffer from severe headaches and general physical disorders. It is not believed that a stay of a few hours will affect a person.

As a war correspondent in Europe and the Pacific I have never looked upon such scenes of death and destruction. It was enough to take your breath away when standing in the center of the area where the bomb fell. You could see nothing but rubble and the seared walls of a few earthquake-proof buildings that remained upright.

Steel was twisted and tile was burned into dust. The wood was charred and torn into small fragments. Air-raid shelters were crushed in.

The damage in Hiroshima is greater than that in Nagasaki, which I saw from a low level in an airplane, but there were indications that the Nagasaki bomb was in some ways more powerful. It appeared that most of the buildings of Nagasaki disintegrated, leaving no rubble to mark the damaged area. Only in a few places were piles of stone, steel, galvanized iron and wood, typical of bomb damage in any city.

Although our Japanese naval guides from Kure, who showed us through the city, told us without emotion that the residents of Hiroshima hated Americans, whom they regarded as the cruelest people in the world, this party of war correspondents and photographers attached to the United States Strategic Air Forces—the outfit that dropped the bomb—was able to walk at will through the streets without being molested.

A 22-year-old American-born Japanese naval lieutenant interpreter, with whom I walked, stopped persons on the streets for us to ask them whether they had been in the city the day the bomb fell. A deaf old man, recognizing us as Americans, came up and shook hands with each of us and made the sign of the Cross to tell us that he was a Christian. Through the interpreter he told us his family had perished in the raid.

Our interpreter, who asked us not to insist that he give us his name, said that he was born in Sacramento, Calif., and that his father still lived in the United States. He came to Japan with his mother about ten years ago and lives in Kure, battered Japanese naval base.

We walked past large granite buildings from which stone fragments still were dropping and peered inside a roofless stone structure that serves as the emergency headquarters for three banks, to which an imperial messenger had just delivered relief funds, for which residents were standing in line.

Surprisingly, the street cars which were not burned out, still operate and Japanese riding on them looked out with more curiosity than hostility at the tall white men in Army uniforms, studying the devastation their country had caused.

Some Bodies Still in Ruins

It was a chilly, drizzly day, but hundreds were moving amid the rubble, from which most of the bodies had been removed and cremated, but a few still remain, giving off the awful, sickening odor of death.

Even the trees were killed by the bomb. Birds that looked like buzzards perched on the torn, leafless limbs.

Nobody was smiling. The patient, long-suffering Japanese, who believed they were winning the war up to the very day the Emperor announced he had surrendered, moved slowly and quietly through the streets to carry out their personal business. There is no work for them here, except in cleaning up, and, as in all Japanese cities, there is little to eat.

In the rubble of destroyed stone and wooden houses we saw, occasionally, an unbroken bottle of sake that, somehow, had survived the blast, but nobody seemed to be drinking.

A visit to Hiroshima is an experience to leave one shaken by the terrible, incredible sights. Here is the final proof of what the mechanical and scientific genius of America has been able to accomplish in war through the invention of the airplane, especially the B-29 Superfortress' and the atomic bomb It should be the last evidence needed to convince any doubter of the need to retain and perfect our air offense and defense lest the fate of Hiroshima be repeated in Indianapolis or Washington or Detroit or New York.

Three Japanese newspaper men who interviewed us wanted to know the role of the atomic bomb in future warfare. We told them it was our purpose as one of the United Nations to make certain that peace is maintained throughout the world.

This has been the most unusual press trip this correspondent has ever participated in. We took off about 8 o'clock this morning from the Atsugi airfield near Tokyo in The Headliner, a Flying Fortress, piloted by Capt. Mark Magnan of Milwaukee, and flew through foul weather and dangerous mountain ranges toward Kure. Just over Kure there was an opening in the clouds and we were able to get down low enough to spot a short 2,600-foot naval fighter plane strip, into which Captain Magnan made an overwater approach, slamming on the brakes almost as soon as the wheels of the big bomber touched the ground. We stopped barely fifty feet short of stone obstacles that would have wrecked our plane at the edge of the field.

We were the first Americans in this battered Japanese naval base and the surprised airfield staff gaped at our big plane as it rolled to a stop. We explained our mission to them and they found two battered Ford automobiles that carried the reporters to the bombed-out granite headquarters of the naval base some miles away.

Japanese officers served tea to the correspondents, who sat beneath the covered driveway of the building entrance while Col. Chester W. Colothorp of the Far East Air Force and Lieut. Col. John R. McCrary of the Strategic Air Force went inside to explain our desires to the Japanese naval commander.

They were received by Vice Admiral Masao Kanazawa, five feet four inches tall, English-speaking former spokesman of the Japanese Naval Ministry, whose first words were: "It is all finished; it is good!"

Smiling and joking, the admiral spoke without apparent bitterness of the sad fate of the Japanese Navy, pointing outside his window to the anchorages where twisted wrecked battleships, aircraft carriers and cruisers lay in ruins from the attacks of Navy and Army fliers. He said no big combat ship remained operational in Kure and that only about ten destroyers were fit for sea duty.

Felt Twelve Miles Away

He said that although Kure is twelve miles from Hiroshima he had felt the terrible explosion.

"It felt like a great wind, which made the trees of Kure sway back and forth," he said.

The admiral provided two Buicks and a Ford and assigned English-speaking officers, the interpreter from Sacramento and a Japanese naval surgeon, Dr. Taira, to accompany us into Hiroshima. We drove through ruins of Kure's urban district, 46 per cent destroyed by a Superfortress incendiary raid on July 2, and moved swiftly along a paved highway, the sides of which were lined with boxes of ammunition, shells, crated airplane motors and other war supplies that had been moved out of the city for safety.

On a slippery bit of road our car skidded and crashed into a crated motor and bounced off it into another but none of the correspondents was injured.

On arriving in Hiroshima the party of Americans split up to walk through the piles of debris and to talk with the city's residents. As we walked along I chatted with the lieutenant from Sacramento and Dr. Taira. Neither was in Hiroshima at the time the bomb exploded but came to the city to aid the relief work a few hours after the blast.

Dr. Taira said searing burns were the principal cause of death and injury. He thought most of the people died within a fraction of a second. He compared the burns with those caused by the overuse of X-ray. He said he believed the report that the radioactivity created by the bomb would make sterile those who were not killed.

Discussing the destruction of white blood corpuscles in the human body, the doctor said he did not think that a stay of a few hours in the blasted city would affect newcomers.

After walking through the city for about two hours we were taken to a modern undamaged building on the outskirts, where in the paneled former board room of the Eastern Oriental Manufacturing Company, motorcycle manufacturers, we were received by Hirokuni Dazai, who controlled the "Thought Police" in the Hiroshima prefecture. The "Thought Police" are similar to the Gestapo in Nazi Germany or the NKVD in the Soviet Union.

Dazai, who had returned to Hiroshima from Tokyo forty minutes before the bomb exploded, provided the official casualty statistics and gave us an account of what happened to him.

He was wearing a white gauze bandage around his head. He said he had suffered a slight wound when his house collapsed upon him and his family. His wife was knocked unconscious but his two children were only scratched.

He said he had not noticed the airplanes overhead and that the great flash that arced through the sky was his first knowledge that a bomb had fallen. He said he had believed hundreds of bombs had fallen when he felt the blast.

It was Dazai who sent the first report of the new bomb to Tokyo. His report undoubtedly played a major role in the emperor's decision four days later to advise the United Nations that Japan was willing to accept the Potsdam declaration if he could keep his job.

Dazai said great fires kept relief parties out of the central part of the city for hours and interfered with land transport, including railways, so that it was almost impossible to move doctors in or take patients out.

We asked him his opinion of the use of this type of bomb. He replied that he believed we had in our possession the ability to destroy every living thing of the civilization established by the gods.

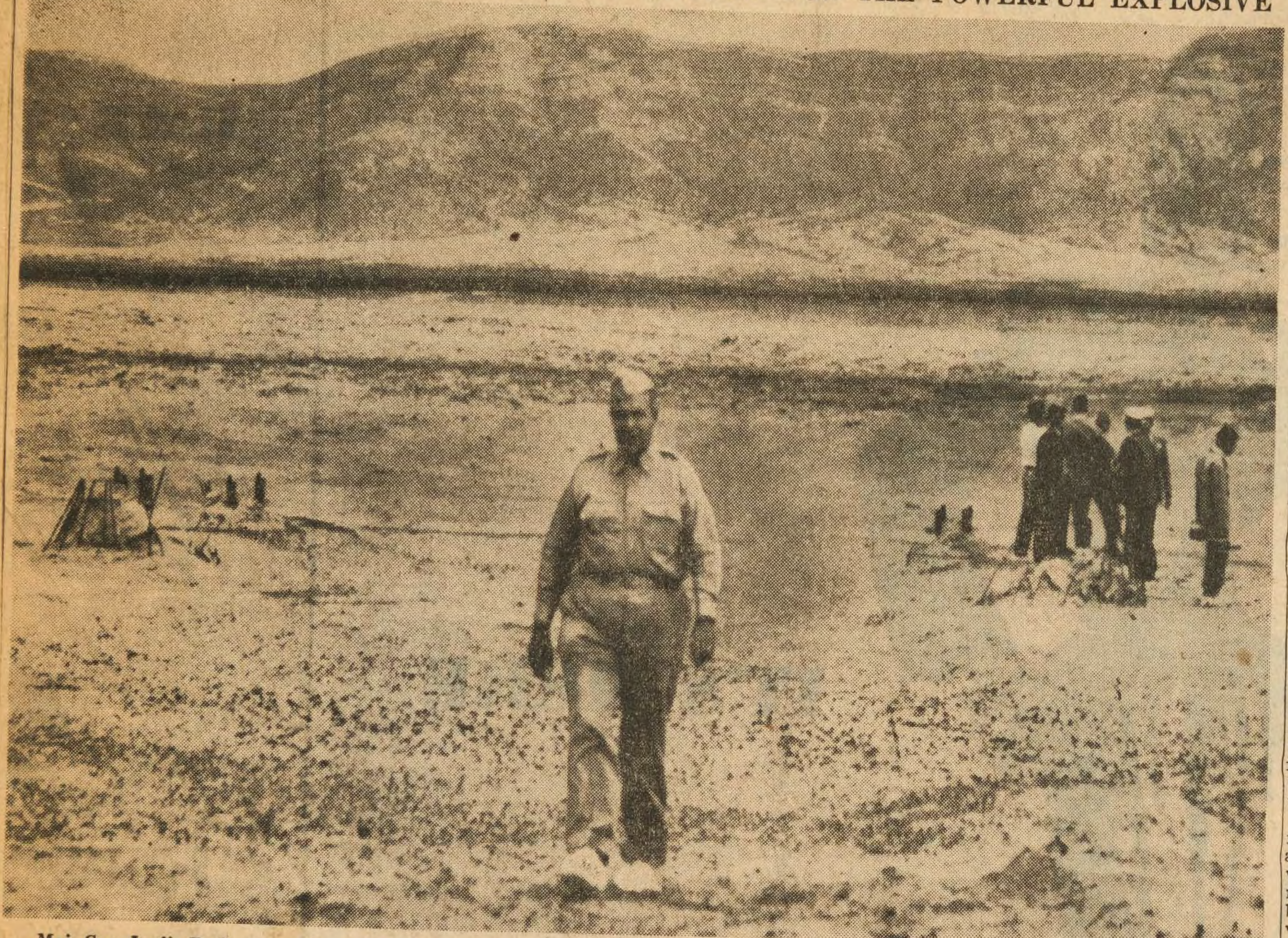
Big Medical Supply Given Hiroshima

By the Associated Press. WT 9/10

SAN FRANCISCO, Sept. 10.—An American investigation team has given the atomic bombing victims of Hiroshima 12 tons of medical supplies, Col. Sum, chief of the American military government sanitation division, was quoted as having disclosed to the Domei Agency in Japan today.

THE NEW YORK TIMES, TUESDAY, SEPTEMBER 11, 1945.

ATOMIC BOMB SITE: AT THE PROVING GROUND FOR THE POWERFUL EXPLOSIVE



Maj. Gen. Leslie R. Groves, chief of the Manhattan Engineering District, walks over the scorched earth at Alamogordo, New Mexico, which was crystallized by the detonation of the test missile prior to its being used against the Japanese. At left is what remains of the foundations of the tower from which the bomb was dropped.

A soldier holds a piece of crystallized sand

Associated Press Wirephotos

TEACHER-BROTHERS AIDED ATOM BOMB

Wade Commends High-School Instructors, Whose Work on Project Remains Secret

Two brothers, both teachers on leave from their posts in the New York City schools, were honored yesterday for their work on the atomic bomb project. In a brief ceremony in his office at 110 Livingston Street, Brooklyn, Superintendent of Schools John E. Wade told Milton and Harold Goldberg that the Board of Education "takes pardonable pride in the fact that you are teachers in the public school system."

In 1942, when Harold, 32 years old, a teacher of physics at Brooklyn Technical High School, and Milton, 34, who taught the same subject at Haaren High School, applied for leaves, they could explain only that "it was for an important wartime project." Even yesterday, when the nature of their emergency job was made public, their specific contribution to it was still secret.

However, Prof. John Dunning of Columbia University, one of the scientists in charge of the atomic research said: "The Goldbergs had, from their past experience, a unique background, vital to the carrying through of atomic energy plans."

The brothers were graduated from City College and did graduate work at Columbia University, where they specialized in nuclear research. Since 1935 they have been associated at various times with the Columbia physicists in atomic studies. They are unmarried, and live with their mother at 3336 Hoe Avenue, the Bronx.

Scheduled to return to their classroom duties in January, the brothers are undecided about their futures. They explained yesterday that they would like to continue their atomic research, but that they felt also that teachers have an extremely important post-war job, since "the only hope for world peace is through education."

Dr. Wade, in his greeting to the brothers, said:

"You have played an immeasurable part in bringing to an end this most horrible of all wars and in bringing victory to our arms. You have served your country and all mankind as few other men have had the opportunity or the qualifications to do."

ATOMIC BOMB AID WINS 'E'

Nine Companies Associated With Oak Ridge Base Honored

Special to THE NEW YORK TIMES.

WASHINGTON, Sept. 10—Twenty-seven more companies have won the Army-Navy award for excellence in war production. Nine of the awards went to companies associated with the construction or operation of the Clinton Engineer Works, huge industrial base at Oak Ridge, Tenn., which had a leading part in the development of the atomic bomb. These companies were Carbide and Carbon Chemicals Corporation, Clinton Laboratories, Fercleve Corporation, H. K. Ferguson Company, Ford, Bacon & Davis, Inc., J. A. Jones Construction Company, Inc., Kellex Corporation, Stone & Webster Engineering Corporation and Tennessee Eastman Corporation.

The other recipients of today's awards were:

highp itch-

All American Aviation, Inc., manufacturing division, Wilmington, Del.
Austenal Laboratories, Inc., New York plant.
Cox & Stevens Aircraft Corp., Mineola, L. I., N. Y.
Eastern Amplifier Corp., New York.
Electro Metallurgical Co., Area plant, Niagara Falls, N. Y.
Gamewell Co., Newton, Mass.
Harshaw Chemical Co., Area O, Brooklyn plant, Cleveland.
Hooker Electrochemical Co., special materials plant, Niagara Falls.
The Linde Air Products Co., Ceramics plant, Tonawanda, N. Y.
Newark Wire Cloth Co., Newark, N. J.
Oberdorfer Foundries, Inc., Syracuse, N. Y.
Odin Stove Manufacturing Co., Erie, Pa.
Prescott Wilson, Inc., New York plant.
Frank G. Schenuit Rubber Co., Baltimore.
Standard Rolling Mills, Inc., Brooklyn.
Surprenant Electrical Insulation Co., Clinton, Mass.
Judson L. Thompson Mfg. Co., Waltham, Mass.
Workshop Associates, Newton Highlands, Mass.

64 EDUCATORS ASK ATOM DATA SHARING

Members of the University of Chicago Staff Sign Petition to Truman

Special to THE NEW YORK TIMES.

CHICAGO, Sept. 9—A recommendation that the United States share the secret of the atomic bomb with other nations in a gesture of confidence has been sent to President Truman in the form of a petition signed by sixty-four members of the faculty and research scientists of the University of Chicago, it was disclosed today.

The signers did not include such leaders in the university's atomic research work as Dr. Robert M. Hutchins, chancellor; Dr. Arthur Holly Compton, Nobel Prize winner and dean of the division of phyical sciences, and Dr. Samuel K. Allison, Professor of Physics, who has been appointed head of the new Institute for Nuclear Study.

"Our country has shown its strength in war," the petition stated. "Now, in peace, it can show its generosity and, where need be, its penitence." The time also had come, it was added, for the United States to show its "wisdom," "magnanimity" and "constructive daring."

Hit at "Temporary Safeguard"

"Secrecy concerning the atomic bomb is a temporary safeguard against frightful dangers," the petition declared. "Yet, if we attempt, probably vainly, to maintain the secret for long we thereby reveal and encourage unfaith in the United Nations and appear to initiate a secret armament race, pre-eminence in which could only be determined by sudden war, presumably catastrophic to both sides but giving a probable advantage to the aggressor or to the country with the most dispersed industry and population.

"If we could secure mutual sharing of information among the United Nations, a new basis of confidence and real security might be attained. We ask the Government to seek—through national and international investigation, adequately financed—for a more hopeful and statesmanlike plan concerning the atomic bomb than mere persistence in secrecy."

The petition urged that America speed coal, food, clothing and other necessities to Europe and Asia "even at the cost of American discomfort and continued rationing." It also urged that "plain Japanese citizens shall encounter more humanity and less rancor and racial antipathy than the past might lead them to anticipate."

Signers of the Petition

The signers of the petition were the following:

James L. Adams, David S. Anthony, Augustine O. Allen, William B. Blakemore Jr., Joseph C. Bowe, Jerome Brewer, A. M. Brues, George Carlson, Harvey Carlson, Mary M. Dailey, Fred Eastman, Harold B. Evans, Miriam Finkel, Raymond Finkle, Melvin Friedman, F.L. Friedman, Winfred E. Garrison, M. Ginsburg, L. A. Greenblatt, Charles Hartshorne, David R. Hill, Wilburg Katz.

Also, Leonard I. Katzin, Truman P. Kohman, Wilton M. Krogman, Herman Lisco, Francis McMahon, Winston M. Manning, Ralph Marcus, Richard M. Martin, Robert Maurer, Norman Modine, R. J. Moon, Hans J. Morgenthau, Charles Morris, Theodore J. Neubert, James H. Nichols, William P. Norris, Victor Obenhaus, Alfred Pfanstiehl, Dallas B. Phemister, C. Ladd Prosser, William Rubinsen, George Sacher, John Sadauskis.

Also, R. P. Schuman, Benjamin F. Scott, Michael Shandor, Francis R. Shonka, Eric Simmons, Henry C. Simons, J. A. Simpson Jr., Lawrence Steefel, Ellis R. Steinberg, Reginald Stephenson, George Svikla, Ralph W. Tyler, Henry N. Wieman, Amos N. Wilder, Daniel D. Williams, John A. Wilson, N. Wood, Sewall Wright and W. H. Zachariasen.

STRABOLGI ASKS ATOM USE

Bids Foreign Ministers Agree—Fears du Pont Monopoly

NYT 9/10

By Wireless to THE NEW YORK TIMES.

LONDON, Sept. 9—The Council of Foreign Ministers, which opens its meeting here Tuesday, should agree on using the secret of the atomic bomb, Lord Strabolgi said tonight. He claimed there was a "pull baker, pull devil" struggle in the United States because certain interests want all secrets and patent rights turned over to the du Pont chemical firm.

"If these commercial interests had their way," Lord Strabolgi continued, "it would raise the most difficult situation for all the other interested parties, including this country."

MEXICO NATIONALIZES DEPOSITS OF URANIUM

NYT 9/13

Special to THE NEW YORK TIMES.

MEXICO CITY, Sept. 12—The Ministry of National Economy today issued a decree nationalizing all deposits of uranium, actinium and other radioactive minerals that could be used in atomic bombs.

The newspaper Novedades said the Ministry had verified the existence of uranium deposits in Chihuahua, Durango and Guerrero. Geologists, it added, have been sent to those states to investigate the extent of the deposits.

The Ministry said the decree was prompted by the "surprising use of radioactive substances, which must in the future be used for the general welfare of mankind."

REGINA, Sask., Sept. 12 (Canadian Press)—A source of uranium, without which there would have been no atom bomb, lies undeveloped in northern Saskatchewan, north, officials of the Resources Department said today.

A deposit of pitchblende, from which uranium is obtained, was discovered by Joseph Errington in July, 1935. Federal geophysicists examined the find during the summer and reported their findings to Ottawa.

GEN. GROVES GETS D. S. M.

Chief of Atomic Bomb Project Cited for Part in Ending War

WASHINGTON, Sept. 12 (U.P.)—Maj. Gen. Leslie R. Groves, officer in charge of the atomic bomb project, received the Distinguished Service Medal today for achievements "of unfathomable importance to the future of the nation and the world."

In presenting the medal, Secretary of War Henry L. Stimson said it was a very rare occasion when the work of a single officer has so much to do with ending a war.

The citation said that General Groves coordinated, administered and controlled the development of the atomic bomb.

"He accomplished his task with such outstanding success," the citation said, "that in an amazingly short time the Manhattan Engineer District solved this problem of staggering complexity, defeating the Axis powers in the race to produce an instrument whose peacetime potentialities are no less marvelous than its wartime application is awesome."

Truman Order Prohibits Sale Of 'Atomic' Deposit Resources

NYT 9/14

Mining and Removal Rights on All Public Lands Are Reserved to U. S. Regardless of Leases and Licenses Issued

Special to THE NEW YORK TIMES.

WASHINGTON, Sept. 13—President Truman acted today to protect American sources of materials for the atomic bomb by issuing an executive order withdrawing from sale all public lands that contain radio-active minerals.

The order would prevent also the sale of such minerals taken from public lands and reserves to the United States the right to "mine and remove" these minerals from any public land occupied under leases, licenses or other authorizations granted in the future.

Although the order specifically applies to lands in the public domain, it is understood that the policy of the Government, by appropriate procedure, is to bring under its control all lands that produce the materials for the atomic bomb, and it has been indicated in official circles that agreements have been negotiated with other countries that would protect such minerals from falling into the hands of nations that might misuse them.

At the same time, Maj. Gen. Leslie R. Groves, who directed the job of developing the atomic instrument for offensive purposes, predicted to a news conference that it would be "a number of decades" before the energy of the atom bomb was harnessed for any beneficial peacetime civilian use.

President Truman's order harnessing all atomic mineral sources into Government control came as no surprise. It had been rumored for days that the step would be undertaken as a means of keeping the means if not the secret of the atomic bomb out of the hands of those who might, conceivably, use it against the policy of this or other Governments.

TEXT OF TRUMAN'S ORDER

The President's order, calculated to safeguard the secret as well as the sources of supply, read:

By virtue of the authority vested in me as President of the United States, it is hereby ordered as follows:

(1) Subject to valid existing rights, all public lands of the United States, including Alaska, which contain deposits of radioactive mineral substances, and all deposits of such substances, are hereby withdrawn from sale and all other forms of disposal under the public-land laws, including the mining laws, and reserved for use of the United States.

(2) So far as not in conflict with existing law, all lands in the United States, its territories or possessions, heretofore acquired by the United States which contain deposits of radio-active mineral substances owned by the United States are hereby reserved from sale, and all leases, licenses, or other authorizations of whatever kind hereafter granted to occupy or use such lands, shall reserve to the United States the right, at any and all times to enter upon such lands, and mine and remove such mineral substances; and all such lands hereafter acquired by the United States shall become subject to provisions of this paragraph under their acquisition; Provided, that no reservation under this paragraph shall interfere with the use of the lands established or indicated by any Act of Congress.

HARRY S. TRUMAN.

Scientists Decorated

White House issuance of the President's order was without comment. It happened to coincide with the conference prediction of General Groves at which Secretary of the Navy James V. Forrestal presented the Distinguished Service Medal to Commodore William S. Parsons who represented the Navy in development of the atomic bomb.

In addition to decorating Commodore Parsons, Mr. Forrestal presented Distinguished Civilian Service Awards to Dr. Ross Gunn and Dr. Philip H. Abelson of the Naval Research Laboratory for their scientific contributions to the splitting of the atom.

WOULD GUARD ATOM BOMB

Sumners Bill Calls for Death for Revealing Its Secret

NYT 9/12

WASHINGTON, Sept. 11 (AP)—Legislation providing the death penalty for divulging atomic bomb secrets to foreign powers was introduced today by Representative Hatton W. Sumners of Texas, chairman of the House Judiciary Committee.

"Some safeguard to protect our interests should be taken pending a determination of policy," he said. "Everybody is discussing what we should do about this terrible weapon. We have invesetd $2,000,000,000 in public funds in it. We have in it the world's most powerful force, yet with all this talking we may be letting the secret out before we formally determine what policy we should adopt."

Atomic Bomb Responsibilities

Resolving of Problem in Relation to Peace Is Linked to Moral Leadership of America

NYT

9/12

By HANSON W. BALDWIN

Five weeks ago the first atomic bomb ever used in warfare was dropped on Hiroshima, Japan.

In that five weeks the war has ended, reconversion is well started, troops are pouring back from overseas, some political problems—international and domestic—have been at least tentatively resolved, and the American public is gradually readjusting itself to the new dynamics of peace.

But nothing has been done about the atomic bomb.

The great surge of public awe, of overwhelming interest and international concentration has slackened; the iron of public opinion, which was malleable, is settling now into the cold mould of the old order. What was needed to accompany the atomic bomb was some action in the political and moral and psychological fields as dramatic and as tremendous as the achievement of atomic fission. That no such action has yet been taken is the world's loss—and America's loss.

For the truth is that the United States has sacrificed its moral leadership of the world. Actually the first use of the atomic bomb did not mark the end—it is to be hoped the temporary end—of that leadership. The mass bombing of European cities, miscalled "precision" bombing but actually area bombing in its effects, was just as terrible for the civilian men, women and children killed and wounded as for those blasted by the atomic bomb.

The fire attacks upon Japanese cities burned people to death fully as irrevocably as did the atomic bomb. The atomic bomb had a quantitative advantage in death and annihilation; more people were killed, more burned, more homes destroyed, but actually the moral principle involved in its use was no different from that established a thousand times before in the war.

Moral Aspect Stressed

It may be argued with perfect validity that the Germans and the Japanese started the evil practices, and that there is no crime worse than war itself. It may also be argued that it is futile to try to make war moral; in fact that there is a certain humanity about trying to make it so horrible that it will be ended quickly—thus saving many lives at the expense of a relative few, as in the case of Japan—or in the ultimate case by making war so annihilating and terrible that it will be made impossible.

Regardless of the validity of these arguments, in the mind of many foreigners and of a considerable number of Americans, the atomic bomb was not only a tremendous scientific achievement; it marked the end of the moral leadership of America.

It is possible that this is a mistaken conclusion; certainly our leaders are earnest men who pondered long and seriously the terrible alternatives with which the bomb confronted them. But it is certain that the United States, which has won by far the matériel supremacy of the world, which today is incomparably the world's most powerful nation, is not equally the world leader in the moral, political and psychological fields.

We have, it is true, pressed the cause for international collaboration. But this is not enough; since San Francisco the atomic bomb has changed the world as we knew it. We helped to achieve, with the atomic bomb, the aim of winning the war, but we did not go beyond the war to enlist atomic fission in the winning of the peace.

The first great psychological surge of mixed fear and hope—fear that man had at last created a Frankenstein monster, hope that at last wars might be ended—has passed, and therefore the key moment is gone, but it is not perhaps too late to enunciate a statement of principles and desires to be pressed and fought for.

We have, maybe, three to five years—perhaps more, perhaps less—before the secret of the manufacture of the atomic bomb becomes more or less world-wide. They should be years wisely used, for the opportunity will not knock again.

Program Is Suggested

As a start, the program that might guide some of our international actions might include:

(1) Retention for the time being—at least for several years—of the secrets of the atomic bomb, pending the strengthening of the United Nations Organization, better political stabilization of the world, determination of some of the outstanding problems left from the war and progressive steps for the world-wide limitation of armaments.

(2) Immediate proposals for the world-wide abolition of conscription.

(3) Immediate proposals for world-wide limitations, even at high levels, of national armies, navies and air forces.

(4) Rapid determination of the size of the armed forces to be made available to the United Nations Organization and determination of the exact role of the military staff committee; the strengthening of both and a progressive internationalization of both as rapidly as possible; and the opening of the armed forces at the disposal of the United Nations to international enlistment.

(5) Elimination of the veto power in the voting procedure of the Security Council of the United Nations Organization.

(6) Eventual proposals for the outlawing of the atomic bomb. These proposals might embody a mutual agreement on the part of all signatories not to utilize atomic fission for war purposes except in *retaliation*. When such an agreement has been made, and when and if the United Nations Organization has been strengthened and the above program realized, at least in part, the secret of the manufacture of the atomic bomb might be transmitted to the United Nations Organization.

Any such program as the above is fraught with difficulties so great that no easy accomplishment can be possible and our best efforts may be doomed to failure. But we must make those efforts nevertheless if the United States is to compensate for what in the eyes of much of the world is its decline of moral leadership.

We must make those efforts, too, for the interest of man. Not to prevent man's annihilation, or the end of civilization, for neither is impending, but to prevent man's reversion to the Dark Ages and the spiritual, mental and political loss of all that our material progress has made possible.

U. S. ATOM BOMB SITE BELIES TOKYO TALES

Tests on New Mexico Range Confirm That Blast, and Not Radiation, Took Toll

NYT 9/12

By WILLIAM L. LAURENCE

Special to THE NEW YORK TIMES.

ATOMIC BOMB RANGE, New Mexico, Sept. 9 (Delayed)—This historic ground in New Mexico, scene of the first atomic explosion on earth and cradle of a new era in civilization, gave the most effective answer today to Japanese propaganda that radiations were responsible for deaths even after the day of the explosion, Aug. 6, and that persons entering Hiroshima had contracted mysterious maladies due to persistent radioactivity.

To give the lie to these claims, the Army opened the closely guarded gates of this area for the first time to a group of newspaper men and photographers to witness for themselves the readings on radiation meters carried by a group of radiologists, and to listen to the expert testimony of several of the leading scientists who had been intimately connected with the atomic bomb project.

The ground, visited for the first time even by Maj. Gen. Leslie R. Groves, over-all director of the atomic project, since that historic morning of Monday, July 16, gave awesome testimony on a number of subjects.

It revealed, even at a glance, the tremendous power of the atomic explosion that had blasted the

Continued on Page 4, Column 2

U. S. ATOM BOMB SITE BELIES TOKYO TALES

Continued From Page 1

earth over a radius of 800 yards from the center.

It gave mute testimony of the enormous temperatures developed at the split instant of the explosion, fusing the earth for a radius of 1,200 feet into a green, glass-like coating resembling fine jade.

It told of the enormous pressure that had compressed the earth below it over an area of 400 yards into a giant bowl that reached a depth of twenty-five feet.

It showed that by far the majority of deaths within the radius of the explosion's effectiveness had been caused by the tremendous power of the blast and by the heat and fires resulting from the temperatures, estimated at millions of degrees.

The visitors saw a scene of desolation and devastation that made the surrounding semi-desert appear as a fertile oasis. Both from the ground and from the air, the sight is an unforgettable one.

Before entering the area white canvas sandals to pull over our shoes were furnished to us. This, General Groves explained, was to make certain that some of the radioactive material still present in the ground might not stick to our soles.

As we walked over the ground we were preceded by radiologists carrying Geiger counters, sensitive instruments that respond instantly to any radiation in their vicinity, revealing on a graduated dial the exact quantity present.

Instruments Belie Japanese

The Geiger counters supplemented the testimony given by the ground's appearance. They showed that less than two months after the explosion the radiations on the surface had dwindled to a minute quantity, safe for continuous human habitation.

Only in the center of the saucer, over a radius of about fifty yards, were the radiations higher than the standard tolerance dose for continuous exposure. In this area it would take 600 hours of continuous habitation to produce fatal results, according to the scientists present.

Furthermore, it was pointed out that the radioactive material on the fused surface constituted only about one-eighth of an inch. It would therefore be relatively easy to remove this surface material and make the ground safe for immediate habitation.

At the rate the radiations have diminished during the past two months, it was pointed out, the entire area will be free of them within a relatively short time.

The atomic explosion in New Mexico was from a steel tower only 100 feet from the ground, whereas the bombs over Hiroshima and Nagasaki were dropped from a bomber and exploded in the air from a much greater height, a scientist pointed out. Detonation at that height over the Japanese cities, he said, greatly reduced the absorption of the gamma rays in the ground, so that there were fewer of these radiations in Japan than in New Mexico.

This finding is borne out by a report just recieved by General Groves from Brig. Gen. Thomas F. Farrell, his next in command, who is now in Japan with a group of American scientists to study the effects of the bombs on the scene.

The studies of the American scientists are still in the preliminary stage, General Groves stated. But he added that, according to General Farrell, Japanese sources now admitted that eleven days after the bomb had pulverized Hiroshima the radiation there was much less than the tolerance dose, which means, he added, that "you could live there forever."

Most of the casualties in Hiroshima, these Japanese sources now admit, according to General Farrell, were owing to the blast and its consequent collapse of buildings and flying debris and to burns from radiant heat and subsequent fires. By far the majority of the deaths came from the blast, they believe.

Persons in the center of the explosion, General Groves stated, "could be killed by fifteen different ways," but all the evidence indicates that it was the blast. The same Japanese sources now believe that there is no present danger in Hiroshima from surface radiations. Vegetation growing on the Hiroshima parade grounds supports this belief.

Foe's Propaganda at Work

"The Japanese claim," General Groves added, "that people died from radiations. If this is true, the number was very small.

"However, any deaths from gamma rays were due to those emitted during the explosion, not to the radiations present afterward. In the area where people could be killed by radiation they were killed by other causes, particularly blast.

"While many people were killed, many lives were saved, particularly American lives. It ended the war sooner. It was the final punch that knocked them out. Otherwise they might have kept on fighting for a longer period."

The Japanese are still continuing their propaganda aimed at creating the impression that we won the war unfairly, and thus attempting to create sympathy for themselves and milder terms, an examination of their present statements reveals.

Thus, at the beginning, the Japanese described "symptoms" that did not ring true. More recently they have sent in a radiologist, and since then the symptoms they decribe appear to be more authentic on the surface, according to the radiologists present here today.

"Relief" Workers Misnamed

The Japanese, for example, had sent out a report that relief workers sent into Hiroshima after the blast had received radiation burns. "We now know from Japanese sources," General Groves went on, "that these were actually workers who were sent into Hiroshima before the bombing to evacuate the city on prior order. They simply were hurt in the original blast and were not examined and treated as they should have been."

In addition to General Groves who represented the United States Army, the group of experts conducting the tour included Prof. J. R. Oppenheimer, who directed the scientific research and development of the bomb; Prof. Kenneth T. Bainbridge of Harvard University, who was in charge of the historic test explosion that gave the go-ahead signal for the atomic bombings of Hiroshima and Nagasaki; Dr. Victor R. Weisskopf, theoretical physicist of the University of Rochester (N. Y.); Prof. Robert F. Bacher of Cornell University, Dr. Richard W. Dodson, radiochemist of Pasadena, Calif.; Dr. Louis H. Hempelmann, radiologist of St. Louis, Mo.; Dr. J. G. Hoffman of Buffalo, and Major John Ferry, radiologist, of Oak Ridge, Tenn.

NYT 9/13

AFTER-EFFECTS OF THE BOMB

The measurements of residual radioactivity which were made in New Mexico, over the area where the first atomic bomb was exploded in a test made nearly two months ago, do not support the reports that have come from Hiroshima and Nagasaki of lingering death caused by powerful radiations from contaminated soil and buildings. There is no doubt that concussion and the terrific heat momentarily generated were far deadlier than any long-delayed effects. An American scientific mission is now in Japan, but it is hardly to be expected that much residual radioactivity will be detected there and measured at this late date. More trustworthy will be the medical examinations of the many Japanese who believe that their health has been permanently injured by radioactivity and that they face death.

When it released Prof. H. D. Smyth's report on the bomb the War Department stated that "on account of the height of the explosion practically all the radioactive products were carried upward * * * and dispersed over a wide area," and that "even if in the New Mexico test, where the height of explosion was necessarily low, only a very small fraction of the radioactivity was deposited immediately below the bomb." Evidently after-effects were studied before the bomb was launched against Japan. But it is with the physiological damage that we are now concerned. Experiments conducted with animals have enabled radiologists to determine exactly what dosages of powerful X-rays and gamma rays can be safely administered in the treatment of cancer. On the basis of this experience Japanese reports of a reduction in red-cell blood counts must be dismissed as fiction. On the other hand, there is the possibility that white blood cells may dwindle in number, but even this must be considered skeptically because gamma rays are rapidly dissipated as the distance from the source increases.

The bomb in the New Mexico test was exploded not more than a hundred feet from the ground, but each of those loosed on Japan at a height which was not less than 1,000 feet and which was probably nearer 2,000. It would seem to follow that residual radioactivity should be more marked in New Mexico than in Japan. Nevertheless, it must be remembered that all three bombs were set off weeks ago and that the findings on this account alone are not conclusive. Though radiologists are convinced that, given the intensity of radiation from a source, they can predict physiological effects at any distance, it might be well to explode another bomb in New Mexico, make the necessary measurements, even note what happens to the blood cells of animals, and thus allay any lingering doubts.

ATOM BOMB KILLED NAGASAKI CAPTIVES

8 Allied Prisoners Victims—Survivor Doubts After-Effect—2d Blow More Powerful

NYT 9/10

By W. H. LAWRENCE

By Wireless to THE NEW YORK TIMES.

NAGASAKI, Japan, Sept. 9—Eight Allied prisoners of war were killed and thirty-eight were injured by the atomic bomb explosion over Nagasaki one month ago today.

They were among 200 Netherland, British, Australian and Indonesian captives in an unmarked prison camp squarely in the center of the great Mitsubishi arms works—a location selected by the Japanese for the prisoners of war in direct violation of international law.

It was a camp location that never had been certified to the neutral Swiss Government nor to the belligerent powers, and the aviator who flew the Superfortress from which the bomb was dropped could not have known that the Allies' prisoners were below him in the center of a great industrial area and an ideal and certain target for a bombing force.

The Nagasaki Police Superintendent, Gen. Shiro Mizogoshi, volunteered the information about the killing of the prisoners of war to reporters today as part of an obvious Japanese propaganda campaign calculated to shame Americans for using such a devastating weapon of war.

Foe Seeks to Win Sympathy

We now have visited both Hiroshima and Nagasaki, the only two cities against which the atomic bomb was used before Emperor Hirohito decided to surrender, and I am convinced that, horrible as the bomb undoubtedly is, the Japanese are exaggerating its effects in an effort to win sympathy for themselves in an attempt to make the American people forget the long record of cold-blooded Japanese bestiality.

Reporting that 26,000 persons already have died in Nagasaki as a result of the bombing, Mizogoshi volunteered the estimate that 10,000 of these were members of the Catholic church. He went out of his way to make certain that we saw the ruins of a great Catholic cathedral.

[Urekami Cathedral, the largest in the city, is in ruins, with only part of the front entryway standing, The Associated Press reported. A mile away a second and smaller church is gutted, but a third church in another valley was little damaged.]

Mizogoshi pointed out hospitals, schools and a medical college that had been blasted and burned. He paid less attention to the great Mitsubishi and other arms factories, which were in the heart of the area affected by the bomb.

He said he thought 15,000 of the wounded would die, but I am inclined to think that he over-estimated, since the death rate now has dropped off to between ten and twenty persons a day.

Survivor Discounts Effects

While Japanese officials continue to spread the rumor that the area where the bomb fell may be uninhabitable for as long as seventy years, the evidence in both Hiroshima and Nagasaki is that thousands of people are living in the devastated areas, seemingly without ill effects.

We talked today with Lieut. Jacob Vink of Bandung, Java, a medical officer with the Royal Netherlands East Indies Army, who was in the prison camp destroyed by the bomb, and he does not put much stock in rumors of lingering harmful effects.

Lieutenant Vink did confirm, however, Japanese reports that some persons who suffered only minor burns or apparently had recovered from more serious burns get a mysterious relapse and weeks after the bombing die from an acute shortage of both white and red blood corpuscles.

He told us these symptoms and told us that two of the Allied soldiers under his care developed these symptoms and died—one of them twenty days after the bombing at a time when his burns appeared well on the road to healing.

Lieutenant Vink was not nearly so pessimistic as the Japanese, however, who said that they believed that every person burned by the bomb would die of this mysterious malady. Lieutenant Vink said he thought the thirty-eight Allied wounded now under his care would recover.

Lieutenant Vink said three Netherland and one English prisoner were killed almost instantly by the bomb and the fires which followed, and that four Netherland soldiers, including the camp commandant, died later of their wounds and the after-effects caused by the uranium in the atomic bomb.

Lieutenant Vink, a 1936 graduate of the University of Utrecht Medical School in the Netherlands, said that while he was inclined to doubt that lingering radioactivity would harm persons still residing in the area, he would feel much more comfortable about his patients when it was possible to evacuate them from the Nagasaki area to a sector where they could receive adequate medical attention. Their present camp is several miles from the point where the bomb exploded.

In the course of the last two weeks this correspondent has walked through both Hiroshima and Nagasaki and has had a good look at both from the air.

While the area of destruction in Nagasaki is less than that in Hiroshima, I am convinced that the second bomb was more devastating than the first one employed against Hiroshima.

The increased power of the bomb is clearly visible at the center of impact. The buildings of Nagasaki were knocked flatter than those of Hiroshima. There is less debris and, in the very center of the bombed-out area, where eyewitnesses said the effect of a vacuum was created, there was scarcely any evidence of sticks and stones that make up the houses and buildings.

The great steel foundry owned by the Mitsubishi trust is a mass of twisted steel girders, but there is little evidence left of the stone walls that these girders supported. The red brick Catholic cathedral cracked in several parts and the big stone tower crashed through into the auditorium below. On the rare occasions when they were permitted to attend mass, some of the Allied prisoners told Lieutenant Vink they had evidence of Japanese ammunition stored in this church.

Mizogoshi estimated that the bombed-out area of Nagasaki was three kilometers [1.864 miles] from east to west, and five kilometers [3.107 miles] from north to south.

He said 18,000 of Nagasaki's 50,000 houses and buildings had been destroyed by the single bomb and that few of the other 32,000 structures had escaped damage.

The Allied prisoners and the Japanese agreed that the bomb hit Nagasaki about 11 A. M. Aug. 9, and that it fell from a great height attached to three parachutes until it exploded 1,000 to 1,500 feet above the ground.

Its Effect Debated

There are many contradictions about this bomb and the effect that it has on physical material and property. Great buildings were crumbled into dust by the blast. Fires that raged for forty-eight hours were started and many people standing in the streets were burned only on those parts of the body that were exposed toward the center of the bomb explosion. The thinnest kind of summer clothing kept other parts of the body from being burned.

ATOM FLIER TO QUIT AIR

Lieut. Levy, Discharge Due Today, Will Be 'Landlubber' Again

Special to THE NEW YORK TIMES.

PHILADELPHIA, Sept. 9—Lieut. Charles Levy, bombardier of one of the "instrument planes" in the atomic bomb mission over Nagasaki, said today that he expected to be discharged from the army tomorrow at Indiantown Gap and was determined "never to fly any more."

"I only flew in the beginning because it was my job," he declared. "I'm just a landlubber and I intend to be a salesman — shoes or lumber or something."

He spent the day with his wife and 11-month-old daughter. Friday, if he is discharged in time, they will move into a new house they have just bought.

He described the mission over Nagasaki as a fascinating experience.

"There probably is a great peacetime future for atomic power," he asserted, "but I'll remember Nagasaki for a long, long time."

NO RADIOACTIVITY IN HIROSHIMA RUIN

Army Investigators Also Report Absence of Ground Fusing—68,000 Buildings Damaged

NYT 9/13

By W. H. LAWRENCE

By Wireless to THE NEW YORK TIMES.

TOKYO, Sept. 12—Brig. Gen. T. F. Farrell, chief of the War Department's atomic bomb mission, reported tonight after a survey of blasted Hiroshima that the explosive power of the secret weapon was greater even than its inventors envisaged, but he denied categorically that it produced a dangerous, lingering radioactivity in the ruins of the town or caused a form of poison gas at the moment of explosion.

Talking with reporters soon after his return from the site of the first atomic bomb explosion, General Farrell gave this report on the historic Aug. 6 bombing mission:

For a radius of one and a quarter miles from the point of detonation, the area including the Japanese military headquarters was completely demolished, to a radius of two miles, everything is blasted, with some burning; between two and three miles, the buildings are about half destroyed; beyond three miles, the damage is generally slight, but roof damage up to five miles and glass broken up to twelve miles.

Blast Is Chief Effect

General Farrell, former New York State Engineer at Albany, made it clear that the weapon's chief effect was blast, and that only in a limited area whose geographical extent he would not estimate was there any radioactivity and this exclusively at the moment of the explosion.

He said his group of scientists found no evidence of continuing radioactivity in the blasted area on Sept. 9 when they began their investigations, and said it was his opinion that there was no danger to be encountered by living in the area at present.

He also reported that a Japanese radiologist, Dr. Masao Tsusuki, had told the investigating Americans that he as a Japanese scientist "considered it possible that poison gases were released at the time of the explosion of the bomb."

"An official statement we made to Dr. Tsuzuki declared that such an assumption was entirely erroneous," General Farrell reported. "No poison gases were released."

Corpuscle Effect Found

Discussing the radio-active effects of the bomb at the moment of explosion, General Farrell quoted his chief medical officer as concluding that the largest number of casualties probably resulted from blasts, missiles and fires, but he confirmed the Japanese reports that some persons who suffered burns that were non-fatal in themselves now are dying from a marked decrease in the number of white corpuscles required to sustain human life.

[General Farrell said there was no crater or sign of heating of the ground beyond that due to burning buildings, The Associated Press reported. There also was no fusing of the ground nor melting of materials such as in New Mexico, where the bomb was set off at a much lower altitude.]

The extent of the physical damage was greater than the men who designed the weapon believed that it would be, he said.

"The physical destruction in the target area was practically complete," he reported. "The scene was one of utter devastation. The total number of destroyed and damaged buildings was 68,000, or somewhere between 80 and 90 per cent of all buildings in the city.

"One of the reasons Hiroshima was selected as the initial target of the atomic bomb was that it was a Japanese Army headquarters," he concluded. "The commanding general and his entire staff were among the 4,000 troops killed by the bomb."

NYT 9/12

SCIENTISTS AT SCENE OF ATOMIC BOMB TEST

Examining the Roentgenometer which recorded radio activity on the site of the explosion in New Mexico. Left to right are Prof. K. T. Bainbridge of Harvard; Dr. Joseph G. Hoffman of the University of Buffalo; Prof. J. R. Oppenheimer of the University of California; Dr. L. H. Hempelmann of Washington University; Dr. V. W. Weisskopf of the University of Rochester; Prof. R. F. Bacher of Cornell University, and Dr. Richard W. Dodson of California Tech.

Associated Press Wirephoto

ATOM ENERGY TEST IN ENGINE PLANNED

NYT 9/12

Noted Engineer Says He Gets Power From Mercury—To Try It in Locomotive

Special to THE NEW YORK TIMES.

NEWARK, N. J., Sept. 11—Ralph Lucas, chief engineer of the United States Industrial Research and Development Company of Elmira, N. Y., said here today that he had succeeded in releasing atomic energy from mercury in laboratory tests, and that the New York Central Railroad had agreed to provide a locomotive with which to make a test of the practical application of his method.

Mr. Lucas, who displayed correspondence from New York Central officials expressing interest in his project, said he would begin at once the construction of a turbine engine designed to use atomic energy. He added that he expected to complete its installation in the New York Central locomotive within three or four months, whereupon the railroad would have it tested in a remote area in the West.

A teacupful of mercury would provide sufficient power by his method to propel a locomotive drawing 120 loaded freight cars forty-five times across the continent at a speed of 200 miles an hour, Mr. Lucas said. He declared the energy would be released in such a fashion that it would not be explosive in its effects.

Mr. Lucas said his turbine was not in blueprint stage, but that small scale models had been built and operated successfully. He explained that it would consist of a 300-horsepower gasoline engine that would power a dynamo generating 220 volts of electricity. He said this would be rectified through two transformers into 1,440 volts of direct current.

This current would be discharged through two electrodes in a walled steel container, in which the mercury would be placed, he explained. He said that the electronic discharge would set in motion at high velocity the mercury atoms, without disintegrating their cores. Enough of the atom's energy would be released in this way for propulsive but not explosive uses, he said.

Mr. Lucas, who is 54 years old, said that he held 128 patents for various mechanical, chemical and electrical inventions.

New York Central Railroad officials declined yesterday to confirm or deny Mr. Lucas's assertion that they had agreed to supply a locomotive for a practical test of his invention. At first they denied any knowledge of his experiments. Later, however, the publicity department of the railroad released a statement in Mr. Lucas's name saying that he has been "working on a revolutionary power plant, whose method of functioning has been misinterpreted in some quarters."

A DECORATION FOR ATOMIC BOMB CHIEF

Secretary of War Henry L. Stimson, in ceremony at Washington, presenting the Distinguished Service Medal to Maj. Gen. Leslie R. Groves in recognition of his service as officer in charge of the project.

The New York Times (U. S. Army)

ATOMIC POWER CONTROL HELD 'MUST' LEGISLATION

NYT 9/16

U. S. Experts Oppose United Nations Trusteeship of Development

By CABELL PHILLIPS

WASHINGTON, Sept. 15—On Thursday President Truman took belated cognizance of a situation that was causing the country's atom smashers almost as much grief as some of the abstruse physical formulae over which they had labored. By executive order, he clamped rigid Federal control over the extraction of radio-active minerals—the raw material of atomic energy—from all publicly owned lands in the country.

Thus was begun the urgent process of building a protective legal fence around a national asset of incalculable value and unmeasurable potency. It almost certainly was the forerunner of a stouter wall of security which Congress soon will be asked to create through legislation.

But the interim since Aug. 6, when the first announcement of the atomic bomb was made and the cloak of secrecy partly lifted, has been a period of trial and alarmed foreboding for many officials connected with the project.

One View of Situation

"It looks like the golden moment for any enterprising genius who wants to get in on the ground floor of the atomic power industry," one of them remarked a few days before Mr. Truman acted. "The door is wide open. There is nothing to prevent anyone setting up his own atom-smashing plant or even cornering the world supply of uranium ores."

While the President's order is of limited scope—it applies only to publicly owned lands—it does indicate a reassuring intention to fill the dangerous legal vacuum in which the secret of the process is now contained. It was unquestionably an emergency measure, designed to fill the gap until such time as a well-rounded legislative program can be whipped into shape.

What controls can Congress devise which will safeguard national as well as international interests, and at the same time promote the necessary further study and development of atomic power production? Thinking along these lines in military-legislative circles here has coalesced into a fairly consistent pattern.

Foremost in the proposals now being considered is that all deposits of uranium-bearing ores be put in the public domain. This would remove the threat of these minerals falling into unscrupulous private hands and the development of a monopoly. Naturally, this stricture would not apply to the large deposits in Canada and in parts of Europe and Asia. However, it would suffice for as long as the processing of the ores was possible only in this country.

Commission Likely

Secondly, it is believed some form of national commission will have to be created to control not only the ore supplies but all experimental work and developments related to atomic energy. The commission would be endowed with a high degree of autonomy and made answerable to the President alone. Much of the work still to be done is so pregnant with military and diplomatic significance, it is pointed out, that even Congress would have to be deprived of much of its privilege of asking questions.

A third major requirement, it is proposed, would be that active direction of the work be in the hands of men of the highest caliber and integrity. It is not felt that control should properly be exercised by the Army, Navy or any other existing agency of Government, but by scientists and production experts free of any competitive pressures.

Patents to Government

Finally, all patents and discoveries related to the work would remain in the possession of the Government, and the licensing of their use rigidly controlled.

What of the international aspects? Do not the British have a stake in this development? Can the secret of the atom be entrusted to a United Nations trusteeship? These are among the most perplexing problems that Congress will face when it starts consideration of legislation.

Since British scientists made substantial contributions and participated actively in the work at Oak Ridge, Pasco and the scores of laboratories where the mosaic of the atomic bomb was created, it can be assumed that some of them are privy to the whole secret. Presumably with their help Britain could set up its own atomic power project with about the same head start of know-how that American scientists possess.

So far as can be learned, Britain has expressed no intention or desire to do this. However, it is felt that much depends on the course of British-American relations in the immediate future. If the spirit of cooperation which existed between the two Allies during the war gives promise of extending into the peace—and the current financial conferences here are pertinent in this respect—there is reason to believe that Britain will not undertake atomic power projects on its own for the time being.

United Nations Control?

Numerous proposals have been made concerning United Nations' control of future developments in atomic physics. While officials connected with the work here are unwilling to be quoted, it is permissible to say that they take a decidedly dim view of such plans.

They want to know what sort of a trusteeship, composed inevitably of representatives of varying and competing national interests, could be entrusted with such vast power over the very existence of traditional enemies as well as neutral and friendly powers. And how could the sanctions of any such international trusteeship ever be imposed when all the parties thereto have the secret of the atomic weapon?

This point of view resolves itself into the conclusion that the only safe and practical hands to be entrusted with the secret of atomic power are those of Uncle Sam himself. And that, it seems likely, will be the intent of the legislation which Congress will be asked to pass.

NYT

THIS RADIOACTIVE WORLD

9/16

Last week's first-hand descriptions of the atomic bomb range in New Mexico, with its declining but still measurable radioactivity, had an oddly reassuring effect. The scientists who conceived the bomb and put it together did not believe it would start a chain reaction that would destroy the earth. Still, they must have breathed more easily when it did not. They did not believe that it leave the exposed area in a permanently lethal condition. Nevertheless, they were obviously cheerful when they could refute Japanese assertions that this had happened at Hiroshima. The bomb was bad enough. It is not—not yet, at least—as bad as it was painted. Grass and trees might resume growing in a country which had been saturated with atomic bombing. Some animal life, including the human variety, would survive and reproduce.

The prospect is not, however, very inviting. It gives pungency to the week's news of attempts now being made to restore normal conditions around the globe after a war which might itself be considered as a sort of atomic explosion. In New Mexico the scientists used a Geiger counter to register the potentially harmful gamma rays. If there were a Geiger counter that would register economic, social and psychological disturbances it would be busy almost anywhere it was carried. Conferences like those of the Foreign Ministers in London, or those now going on between Britain and ourselves in Washington; attempts to set up governments in Eastern Europe; efforts to provide at least a minimum food and fuel supply for France, the Lowlands and even Britain herself; our own sometimes bungling experiments in Japan and Korea; the negotiations between Chungking and Yenan—all these have their hopeful side. But they do reveal that there are gamma rays alive in the world today that might do incredible harm.

Sometimes it seems that even very highly placed persons are treating the settlement of the late war as though it were like any other war, and did not threaten either the disintegration of matter or the disintegration of human society. There has been no world-wide awakening to the real emergency. A good deal of bargaining is going on. Much of this cannot be avoided. Much of it is a perfectly honest effort to reduce friction between nations and groups of nations. Much of it comes from dire human needs. When Britain, after a great victory, has to tighten her belt and eat and dress no better, perhaps worse, than during the black days of war, we can only imagine what life is like on the European continent, which, in turn, is far better off than East Asia. Today's stakes are the means of livelihood for millions.

The danger is that these means will be sought in a hurtful international competition, a sort of dry war among those who have renounced actual war. It is not easy to write a prescription of avoidance. It is clear, however, that some kind of world patriotism has to be born out of a common danger. This common danger is mutual destruction. It needs to be dramatized just as the danger of defeat in war was lately dramatized. The atomic bomb is still here, and, as a bomb, it is the enemy of all mankind. Its detonator is fear and hate. And no bargaining will do any lasting good which does not bargain away these twin evils.

World Union Proposed

Atomic Bomb Held to Make Such A Move Necessary

The signers of the following letter are all deeply interested in foreign relations.

NYT 9/16

TO THE EDITOR OF THE NEW YORK TIMES:

The atomic bomb has given the American, British and Canadian people a momentary opportunity and a momentous responsibility to secure individual liberty and peace. The opportunity is brief, for we cannot hope to keep this secret more than a few years. The responsibility will endure. If we fail to deliver mankind from tyranny and war now, we who first used this bomb may be remembered as we ourselves remember the Vandals of ancient time.

A free Government when attacked will use these bombs, but its nature gives the strongest guarantee against its initiating aggression. Providence released the secret of the atom to three free nations. How shall they solve the problem now facing them?

Only a sovereign nation is likely to have the power to produce atomic bombs in secrecy or is likely to have the incentive to produce them. Only the existence of other sovereign nations is likely to provide that incentive. Only a sovereign nation needs atomic bombs to coerce it. Where citizens instead of nations are the sovereign units of society, no such bombs are needed to coerce them.

To trust any league, alliance, association or treaty among sovereign nations to outlaw the production or use of atomic bombs is to trust swamps to cease producing mosquitos. Such agreements really give the advantage to the Governments most likely to violate them. The probability of a nation concealing such violation is in direct ratio to its lack of individual liberty.

Citizens Paramount

The sooner we begin to reorganize international relations with the citizen instead of the nation as the governing and governed unit, the sooner we shall eliminate the only reason for producing the atomic bomb. The fastest progress that can be made in this direction by all the United Nations together will be too slow and uncertain. We have a fivefold task:

1. We must eliminate absolute national sovereignty first of all among those nations that already know the secret of the atomic bomb, and establish governmental machinery whereby their citizens can determine and execute a common policy concerning it.

2. We must not lose our head start in atomic power by slackening our research work, or by divulging our knowledge to those nations or institutions that cannot, or do not, guarantee liberty enough to safeguard us against this power falling into the hands of dictators.

3. But we must not proceed so cautiously or delay so imprudently that we lose our present opportunity to unite mankind freely and effectively behind atomic power.

4. We cannot force individual freedom on others, and yet we must contrive to extend it through the world and unite the free as we go, before foreign dictatorship masters the atomic bomb.

5. At the same time we must safeguard freedom against domestic dictatorship rising from economic depression and totalitarian "cures" for unemployment.

Joint Possession a Bond

Joint possession of the secret of atomic energy gives those who have it the common wealth they need to bind them together. They have now a resource to develop that is far richer than was the Northwest Territory when joint possession of it helped create the nucleus of our present American Union.

To save themselves and everyone from the appalling dangers of World Depression II, Dictatorship and World War III, and to harness the power of the atom to the good of mankind, they must equal in the constitutional, social and spiritual fields their tremendous achievements in science, engineering, production and war. They can and they must do this now.

The atomic bomb has given the people of the United States, the United Kingdom and Canada an enduring common responsibility that requires their united common sense and courage. This is only the latest and most urgent in a series of problems they have in common. But they have as yet no common machinery, responsible and responsive to them all, to unite their courage and their common sense democratically, effectively and enduringly on any policy.

Nucleus Needed

The first necessity is that their delegates should meet to constitute such machinery. Until this is done, the world's power to govern the atomic age in freedom will lack the beginning of the atom's power—a nucleus.

It is to be hoped that delegates of other peoples who also are experienced in the practice of individual liberty would be invited to send delegates too. All too few nations have succeeded in providing individual liberty even in their own territory for as long as thirty years—or one generation. It would therefore seem prudent to draw on the wisdom of all who have at least this much experience.

The undersigned propose that the United States should take immediately the proper steps to convoke a convention to form a nuclear union on a free basis adequate to the exigencies of the atomic age and functioning as a unit in the United Nations organization.

We hold that the nucleus it creates should guarantee individual liberty as much, at least, as does the United States Constitution and give all the other guarantees the federal system gives—fair representation, equal justice, defensive strength, effective central power, independent home rule, domestic tranquillity. Membership in the nucleus should be open from the start to any people that is able and willing to uphold these guarantees.

To offer any people that adequately guarantees individual liberty the protection of the nuclear union's atomic power, and all the other great advantages of full membership in it, would seem to be the swiftest, surest way to induce and to preserve real freedom everywhere. This policy would make the advantages of membership in the union ever greater, its territory ever vaster, its vital centers ever more dispersed, and its lead in the creative, defensive and offensive development of atomic power ever more incalculably advanced.

Union of this nucleus a few years ago meant union of actual weakness but potential strength. Now it means union of both actual and potential power.

From the start there would be practically no possibility of overwhelming it by surprise or of resisting its power of reprisal, and these advantages would grow as it grew. At the same time, the guarantees it gave of individual freedom would be guaranteeing everyone more and more that its power would not be used aggressively. And so there would be neither hope of victory nor fear of attack to cause others to combine against it. This union would give ever stronger practical assurance against dangerous armament racing developing during the interim period while it was growing to universality. From the start attack on it would be suicidal for any dictator, even if he learned how to make atomic bombs before his people learned how to be free.

It is of the highest importance that the nucleus be constituted as only the most practical first step toward uniting all humanity, in good time and peacefully, in the one way that can secure life and liberty equally to everyone in this atomic age—a World Republic of Free Men.

Support Necessary

To get this policy adopted, the first essential is for those who believe it to be, on the whole, the best solution to say so. We would be glad to know their opinions. Obviously it is in the general interest to know what support this atomic policy has, and obviously there is no time to lose.

The Greeks had a name for heaven, and from it we got our name for uranium. Now uranium has given us the power to make of earth a heaven—or hell. There is reasoned cause for hope, and none for despair.

Greater than the power of the atom is the power of man. For man has proved that he can govern the atom. It is much harder for men to govern themselves freely and equally than for them to govern atoms. Yet they had already proved in some long-tested experiments that they could do this, too.

Significantly, the nations of men who had governed themselves the longest were the first to govern atoms. This achievement is but the latest evidence of the power inherent in their principles of individual liberty and union.

With the faith and courage that such achievement gives, let us then begin to apply these principles now to unite all mankind.

STRINGFELLOW BARR, LOUIS BROMFIELD, MRS. ROBERT S. BROOKINGS, BRIG. GEN. ALBERT D. COX, FORREST DAVIS, HENRY S. DENNISON, JOHN DEWEY, WALTER DURANTY, CLINTON GOLDEN, MARION HEDGES, FELIX MORLEY, A. J. G. PRIEST, CLARENCE K. STREIT, ROBERT J. WATT, WILLIAM B. ZIFF, WILLIAM H. DANFORTH, NORMAN M. LITTELL, HARRY B. MITCHELL, DAVID S. MUZZEY, CHANDLER OWEN, EMIL G. SICK, HARRIS L. WOFFORD JR., ELLIOTT NUGENT.

Washington, Sept. 13, 1945.

NYT 9/16

Uranium for Bombs

Control of the political and economic power that goes with the atomic bomb is dependent on two factors. The first is the secret of the bomb's manufacture, secrets now held mainly by the United States; the second is possession of sufficient supplies of uranium, the basic material used in producing the bomb. Uranium ores—pitchblende and carnotite are the commonest—are known to occur in limited deposits, sparsely scattered through Europe, Russia, the Congo, southern Australia and North America. In the United States, the mineral has been discovered in several Connecticut localities, in central Texas and in Colorado.

Last week, in a move designed to maintain the United States' pre-eminence in atomic weapons, President Truman acted to protect this country's uranium supply. In an executive order that has been expected for some time, the President directed that all public lands bearing radio-active minerals be withdrawn from sale and reserved for Federal use.

Though Government control, under the order, will be restricted to lands in the public domain for the present, it is understood that eventually all lands that produce materials for the bomb will be brought under official regulation. As a further precaution, agreements are being negotiated with other countries to keep such substances from falling into dangerous hands.

Radiologists Determine the After-Effects of Explosions of Atomic Bombs

NYT 9/16

By WALDEMAR KAEMPFFERT

From New Mexico and Tokyo came news last week of the atomic bomb's after-effects. Japanese tales of hundreds who died weeks after the explosions that wrecked Hiroshima and Nagasaki and of lowered white-corpuscle blood counts were largely refuted. In New Mexico the Army permitted a group of newspaper men to witness instrumental tests of the soil on the spot where a test bomb was exploded nearly two months ago, and in Japan Brig. Gen. Thomas F. Farrell released a preliminary report of a scientific mission of which he is the head and which had been directed to discover what after-effects it could.

In New Mexico the meters indicated residual radioactivity so slight over the experimentally bombed area as a whole that its present physiological effect is negligible. In the center of the crater left by the explosion the radiations were pronounced, yet even here it would take 600 hours of continuous exposure to produce fatal results.

In Japan it was also found that any residual radiation was not sufficient to be dangerous. But Col. Stafford Warren, an expert radiologist on the staff of the American scientific mission, did find a deficiency of white corpuscles in the blood of some Japanese sufferers. He attributes this deficiency not to residual radioactivity but to the powerful gamma rays shot out from the bomb at the moment of explosion.

Not the Whole Truth

Some patients showed no after-effects whatever. Possibly they escaped injury of any kind because they had fled to shelters where they were reasonably safe from flying fragments, rays and heat. As General Farrell puts it, the Japanese "told the truth but not the whole truth." He declined to issue statistics until clinical reports were available. Probably the actual number of casualties will never be accurately known.

Within the bombed areas of Hiroshima and Nagasaki there were Japanese officials who had been instructed to carry out a previously ordered evacuation. All were caught by the blast. Some were wounded. Others, mostly military officers who arrived ten hours later, stated that they had suffered ill effects, including fatigue. None of these alleged sufferers died.

That the Japanese have grossly exaggerated what happened is to be inferred from the findings of Dr. Philip Morrison, Professor of Nuclear Physics at the University of Illinois. He reports that water lilies grew in a ditch not far from the spot over which one bomb exploded. Dr. Masao Tsuzuki, radiologist of the University of Tokyo, and expressed the opinion that poison gases were released at the time of the explosion. The American mission replied that no poison gases were released which were not immediately dissipated.

The official Japanese report was more cautious and just in its estimate of physiological damage. General Farrell quotes this passage from it:

"At present [Aug. 15] an increase in radioactivity in the area of the explosion has been noted, but not to the extent that it will be injurious to human beings. Immediately after the explosion the amount of radioactivity that caused human injuries could not be determined. Also the amount of radioactive substances and the assumption that artificial radioactive substances were created could not be proved."

Too Late to Check

At this late date there is no way of checking radioactivity that might have been detected on Aug. 15. General Farrell is certain that there was none on Sept. 9.

On the whole the reports from New Mexico and Japan bear out a statement issued by the War Department to accompany Prof. H. D. Smyth's official description of the research that led to the invention of the bomb. The War Department there said, "The bomb is detonated in combat at such a height from the ground as to give the maximum blast effect against structures and to disseminate the radioactive products as a cloud. On account of the height of the explosion practically all the radioactive products are carried upward in the ascending column of hot air and dispersed harmlessly over a wide area. Even in the New Mexico test, where the height of the explosion was necessarily low, only a very small fraction of the radioactivity was deposited immediately below the bomb."

Evidently the ground was tested immediately after the experimental explosion. Only the physiological effects were still in question, and these, judging from the dispatches received from Tokyo, are not as severe as the Japanese asserted.

In another War Department release it is stated that "to examine the nature of the crater, specially equipped tanks were wheeled into the area, one of which carried Dr. Enrico Fermi, noted nuclear physicist." There is no doubt that samples of soil were collected and tested for radioactivity. Nor is there any doubt that the physicists who developed the bomb knew approximately what the after-effects of an explosion would be in Japan.

Affect White Corpuscles

Radiologists who have to treat cancer with powerful X-rays and the similar but even more powerful gamma rays emitted by radium and radon have long been aware of the dangers that their patients run. Careful experimentation with animals has made it possible to establish safe dosages. That there is a decrease in the white corpuscles of the blood long after heavy dosages of X-rays or gamma rays are administered is well known, and it is chiefly for this reason that radiologists proceed with such care.

Gamma and X-rays decrease inversely as the square of the distance from the source, which means that their effect should be virtually nil only a few thousand feet from the point of explosion. Besides, it must not be forgotten that the test bomb in New Mexico was suspended not more than 100 feet from the ground (the first accounts put the distance at only fifty feet), whereas the bombs that devastated Hiroshima and Nagasaki exploded at a height which was not less than 1,000 feet and may have been as much as 2,000.

From the cautious statements made by technically informed Army officers there is reason to believe that the bombs released against Japan were intentionally exploded at a height which would be effective so far as concussion was concerned but which would not induce intense and persistent radioactivity in the ground.

At a mile the gamma rays would be so attenuated that they could hardly have the distant effect reported by the Japanese. And the radioactive after-effects should be small. We are, therefore, reduced to considering residual radioactivity in the ground, and in the material of which houses and shelters are built.

Widespread Devastation

Lives and buildings were destroyed in Hiroshima and Nagasaki chiefly by concussion, heat and flying missiles. Japanese reports of the total casualties range from 70,000 to more than 100,000 killed, and from 75,000 to 200,000 wounded. General Farrell doubts their accuracy. "I don't think they know how many people were in the city," he is quoted as having said.

There is no doubt about the devastation. Within a radius of two miles everything was blasted, and there were many fires. Beyond three miles the damage was not great, though roofs were torn off up to five miles and glass was broken up to twelve miles. According to General Farrell, about twenty sound structures of masonry and steel are still standing in the central portion of Hiroshima, but all windows are out and the interiors are gutted. Modern bridges stood up well but handrails and some sidewalks were blasted away. A fire was started in a forest about four miles from Hiroshima.

The effects of the terrific heat were impressive. In a building one mile away plush chairs behind a window were scorched despite the glass. About 55,000 buildings in Hiroshima were burned, and of these 6,800 were totally destroyed and 2,300 were half burned. About 3,800 were partially destroyed by the blast alone.

Science 8-31

"CANNING" URANIUM SLUGS

LEARNING how to "can" uranium slugs was one of the most difficult problems encountered in making atomic bombs, Dr. H. D. Smyth, of Princeton University, consultant on the project, relates in the technical report released by the War Department. The failure of a single "can" might have caused an entire operating unit to be shut down.

The most efficient way of cooling the uranium would have been to let the water flow in direct contact with the radioactive metal in which the heat was being produced. This seemed out of the question, however, since uranium would react chemically with the water. It was feared direct contact between the two would put a dangerous amount of radioactive material into solution and probably even disintegrate the uranium slugs.

No one who lived through the period of design and construction of the Hanford, Wash., plant is likely to forget the problem of sealing the uranium slugs in protective metal jackets, according to Dr. Smyth. The state of the "canning problem" could be roughly estimated by the atmosphere of gloom or joy to be found around the laboratory.

A sheath had to be found that would protect uranium from water corrosion, keep fission products out of the water, transmit heat from the uranium to the water and not absorb too many neutrons.

Metal jackets or cans of thin aluminum were feasible from the nuclear point of view and were chosen early as the most likely solution of the problem, but alternative ideas continued to be explored. Both the problem of getting a uniform heat-conducting bond between the uranium and the surrounding aluminum, and that of effecting a gas-tight closure for the can proved troublesome.

Even up to a few weeks before it was time to load the uranium slugs into the pile there was no certainty that any of the processes under development would be satisfactory. A final minor but apparently important modification in the canning process was adopted in October, 1944, and up to the time the report was written there had been no canning failures.

Science 8-17

THE INSTITUTE OF NUCLEAR STUDIES AND THE INSTITUTE OF METALS AT THE UNIVERSITY OF CHICAGO

IT is planned to establish at the University of Chicago an Institute of Nuclear Studies and an Institute of Metals. Dr. Samuel K. Atkinson, professor of physics, will serve as the director of the Institute of Nuclear Studies.

Dr. Enrico Fermi and Dr. Harold Urey, both of Columbia University, have been appointed professor of physics and professor of chemistry, respectively. Members of the institute will include Dr. Philip W. Schutz, professor of chemical engineering, Columbia University; Dr. Edward Teller, professor of chemistry, George Washington University; Dr. Joseph E. Mayer, professor of chemistry, Columbia University, with his wife, Maria Goeppert Mayer, who will serve as research associate; Dr. Walter H. Zinn, associate professor of physics now in war research in Chicago, and Dr. John Simpson, Dr. Robert F. Christy and Dr. Donald J. Hughes, all of the University of Chicago.

The staff of the Institute of Metals will consist of Dr. Cyril Stanley Smith, director, and Dr. Clarence Zener, professor of metallurgy.

Columbia and the Atomic Bomb

Tokyo Puts Toll of Atomic Bombs At 190,000 Killed and Wounded
Tokyo May Be Next Atomic Target
Washington Prepared to Push Destruction Unless Japanese Surrender.
NEW YORK, TUESDAY, AUGUST 7, 1945.
THREE CENTS
ATOMIC BOMB DROPPED ON JAPAN
TO 20,000 TONS OF TNT
'Vaporized' In Trial of Mighty Bomb
Scientists Awe-Struck as Blinding Flash Lighted New Mexico Desert and Great Cloud Bore 40,000 Feet Into Sky
By LEWIS WOOD
Army Circles Predict Quick Jap Surrender
U.S. Hesitated to Use Atomic
Weighed the Humanitarian Factor Before Dropping Weapon on Japs.
By PHELPS ADAMS
Aerial Tactics Face Revolution

WHEN President Truman's electrifying announcement that an atomic energy bomb with blasting power equivalent to 20,000 tons of TNT had been dropped on Japan broke a 4-year silence surrounding the greatest of all-time secret weapons, the veil of secrecy was also lifted on the biggest project of Columbia's hush-hush war research program. Within the limits of a partially relaxed military censorship it can now be revealed how important a role Columbia physicists and guest scientists played in initiating and carrying out the scientific work that brought about the remarkable development of this super bomb.

Security regulations still obtaining prevent the Columbia men directly responsible for developing and testing the physical principles from giving out any information about their work, but the War Department has just released a 30,000-word report by Dr. H. D. Smyth, chairman of the department of physics of Princeton University, describing the development of the methods of using atomic energy for military purposes. This account serves to emphasize the extent of the contribution made by and at Columbia, especially in the early stages of the research.

First Meeting

Although the idea of atomic power or even atomic bombs had been discussed off and on in scientific circles from the time of the first discovery of the large amounts of energy released in nuclear reactions to the time of the discovery of uranium fission, Professor Smyth declares that the military importance of the latter was first called to the attention of the Government by George B. Pegram, '30PhD, '29ScD, dean of the Graduate Faculties at Columbia and a well-known physicist.

In March, 1939, Dean Pegram, who later became head of Columbia's Division of War Research, telephoned Washington and arranged for a conference between representatives of the Navy department and Enrico Fermi, brilliant Italian physicist who had recently become a professor at Columbia. Fermi suggested at this time the possibility of achieving a controllable reaction of atomic energy using slow neutrons (the force which split the uranium) or a reaction of an explosive character using fast neutrons. The Navy expressed interest and asked to be kept informed, but no further government action was taken until the fall of 1939 when the Columbia and Princeton groups, supported by a letter from Einstein, and through Alexander Sacks of New York, enlisted the aid of President Roosevelt in encouraging work in this field.

By Presidential appointment an "Advisory Committee on Uranium" was created which held its first meeting on October 21, 1939. The immediate result of this meeting was a report issued on November 1 which mentioned both atomic power and an atomic bomb as possibilities. It recommended the purchase of large quantities of graphite (to be used as a "moderator") and uranium oxide, a source of U-235 for experimental purposes, and on February 20, 1940, the first transfer of funds—$6,000—was made from the Army and Navy to purchase these materials. In this way necessary materials were provided for the experiments at Columbia.

A second meeting of the Uranium Committee was held on April 28, but no further recommendations were made, pending the results of the critical measurements on carbon (in the form of graphite) already under way at Columbia. These when obtained showed that the use of carbon as a "moderator" for slowing down the action of the neutrons (obtainable either by the chemical action of radium on beryllium or by use of the cyclotron) so as to avoid resonance absorption and so as to cause fission would afford considerable satisfaction.

Among the most active advisers of the original Uranium Committee were Professors Pegram, Fermi, Urey, and Dr. Leo Szilard of the Columbia group, and Rear Admiral H. G. Bowen, '15AM, head of the Naval Research Laboratory, Washington, D. C.

Special Group Formed

In June, 1940, the Uranium Committee was reconstituted as a subcommittee of the newly created National Defense Research Committee. Harold C. Urey, professor of chemistry at Columbia and 1934 Nobel Prize winner in chemistry, and Professor Pegram became members of the new committee. In the summer of 1941 the committee was enlarged, Pegram became vice-chairman, and Urey, Fermi, and Pegram became subsection chairmen.

After Pearl Harbor, when the program was pushed with all-out effort, the committee was reorganized a third time directly under the Office of Scientific Research and Development and was administered first by the OSRD S-1 Section, and later by a Special S-1 Section Executive Committee. Dean Pegram was named vice chairman of the latter and Professor Urey one of the three program chiefs.

On June 15, 1940 a special advisory group including Columbia Professors Urey, Fermi, and Pegram and Dr. Szilard, research guest of the Physics Department, defined the lines of research to be followed on the uranium-carbon experiment as (a) further measurements of the nuclear constants, and (b) experimentation to establish a chain reaction that would sustain itself. This controlled chain reaction involved release of further neutrons when the uranium atom was split, which would not be absorbed either by impurities present in the "pile" or by the uranium itself, and which would in turn split more uranium atoms ad infinitum. It was estimated that $40,000 would be needed for the first of there, and $100,000 worth of metallic uranium and pure graphite for the latter.

The Columbia group were very eager to determine experimentally which of the three uranium isotopes underwent fission. In 1939 Dr. A. O. Nier, professor of physics at the University of Minnesota, was urged by Dr. John R. Dunning associate professor of physics at Columbia, to separate the several isotopes of uranium using his mass spectrometer. When he was finally successful in February 1940 in separating small amounts of concentrated fractions of U-234, U-235, and U-238, he turned them over to Dunning and to Drs. E. T. Booth and A. V. Grosse, for investigation with the Columbia cyclotron. It was natural, therefore, that this group, under the leadership of Dr. Dunning, interested themselves more than ever in the large-scale separation of uranium isotopes.

The first contract approved and signed by the NDRC, on November 8, 1940, was with Columbia, for continuation of the work already in progress on the approach to a chain reaction using unseparated uranium isotopes with graphite to prevent loss of neutrons. Later contracts were arranged here and at other universities and research institutions until by the following November 16 projects totaling $300,000 had been approved.

Urey began to work on isotope separation by the centrifuge method under a Navy contract in the fall of 1940. The diffusion method of separation was initiated at Columbia by Dunning. In a memorandum which was sent to L. J. Briggs, chairman of the Uranium Committee, in the fall of 1940 Dunning summarized the preliminary investigations made by himself, A. V. Grosse, and E. T. Booth in the Pupin Physics Laboratories. Work was accelerated in 1941 with financial help provided by Urey's contract, and during this period Drs. F. G. Slack of Vanderbilt University and W. F. Libby of the University of California joined the group.

Beginning with 1940 there was some interchange of information with the British. Accounts of British opinion, including the first draft of the British report reviewing the subject, were made available to the top policy group in America during the summer of 1941, and in the fall of that year Urey and Pegram were sent to England to get first-hand information on what was being done there.

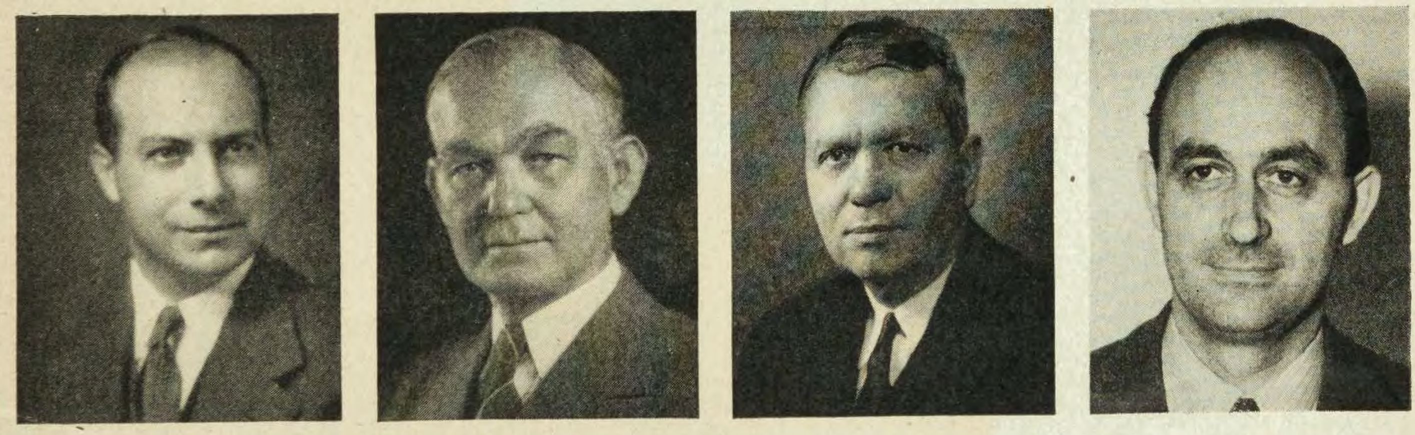
Here they exchanged not only hopes but fears with the British scientists and came back to the United States the first week in December filled with the urgency that we must beat the enemy to the secret of using atomic energy for bombs. This was the first time that any Americans had gone to England specifically in connection with the uranium problem.

Project Expands

By 1942 the theory of isotope separation by gaseous diffusion had been well worked out. It became clear now that a very large plant would be required and that diffusion barriers and pumps would make up the main equipment. Up until May, 1943, Dunning was in immediate charge of the work; Urey was in charge of statistical methods in general. At this time, the work was transferred from OSRD auspices and taken over by the Army. In the summer of 1943, the difficulties encountered in solving some of the phases of the project led to a considerable expansion, and most of the work was moved out of the Columbia laboratories into the Nash building on West 133d Street. On March 1, 1945, since the work had reached the industrial operation stage, the laboratory was taken over by Carbide and Carbon Chemical Corporation.

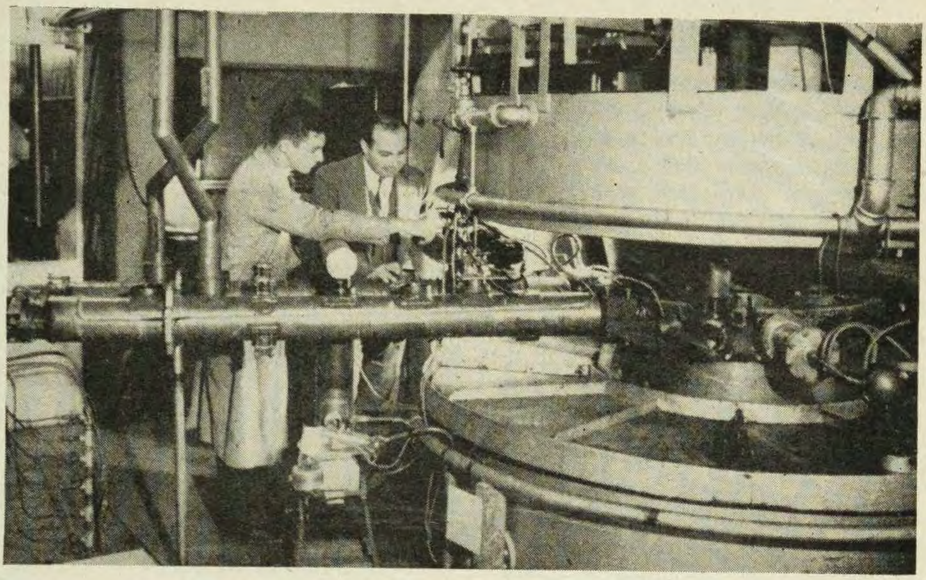
In the meantime, progress on the development of the chain reaction had grown apace. Nearly all of the work on this aspect of the research had been concentrated at Columbia in 1940, but interest in the general problem by individuals at Princeton and the Universities of Chicago and California led to the approval of certain projects at these institutions early in 1941. Thereafter the work of all these groups was co-ordinated under the direction of Dr. Arthur H. Compton. Experiments, involving a variety of arrangements of graphite and uranium continued until the Spring of 1942, when the Columbia group under Fermi moved to Chicago with its accumulated material and equipment. At Chicago on December 2, 1942, Fermi and his group, among them Walter H. Zinn, '34PhD, Herbert L. Anderson, '35AB, '37BS, '40PhD, George L. Weil, '31AM, '42PhD, and Bernard T. Feld, '45PhD, attained the first self-sustaining chain-reacting "pile" of uranium and graphite, and thus achieved the goal of a steady and controllable release of atomic energy.

The principles necessary to the production of an atomic energy bomb had all been worked out now, and it remained but to rush into production with the materials and put them together. In the spring of 1943 an entirely new laboratory was established at Los Alamos, N. M., near Santa Fé, under J. R. Oppenheimer, for the purpose of investigating the design and construction of the atomic bomb from the stage of the receipt of U-235 or plutonium to the stage of the use of the bomb. The new laboratory improved the theoretical treatment of design and performance problems, refined and extended the measurements of the nuclear constants involved,



THE END RESULT OF THE WORK WAS THE END OF THE WAR

Prof. John R. Dunning *Dean George B. Pegram* *Prof. Harold C. Urey* *Prof. Enrico Fermi*



OUT OF THE MACHINE, A NEW FORCE
Columbia's cyclotron did its part

developed methods of purifying the materials to be used, and finally, designed and constructed operable bombs.

Credit for Columbia's participation in the development of the atomic energy bomb should not go alone to the few names space has permitted recording. Dean Pegram especially emphasized that mention should not be omitted of the contributions of those temporary Columbia men who were members of the University's Division of War Research. He declared that the success of the work at Columbia owes very much to the collaboration of these colleagues from other institutions; for example, such men as Professors E. Mack, Jr., of Ohio State, H. S. Taylor of Princeton, and P. H. Emmett of Johns Hopkins universities, and Dr. L. M. Currie of the Carbide and Carbon Chemical Corporation.

Secrecy Still Applies

At the present time no complete list of names of Columbia men who worked on this great project is being given out. Secrecy provisions still apply except information as is given out by the Army authorities. Hence only names that are given in the Smyth document are referred to in this article. Many faculty members and a great many Columbia alumni contributed vitally to the success of the undertaking, most of them in the Columbia laboratories, although many did their work at other sites.

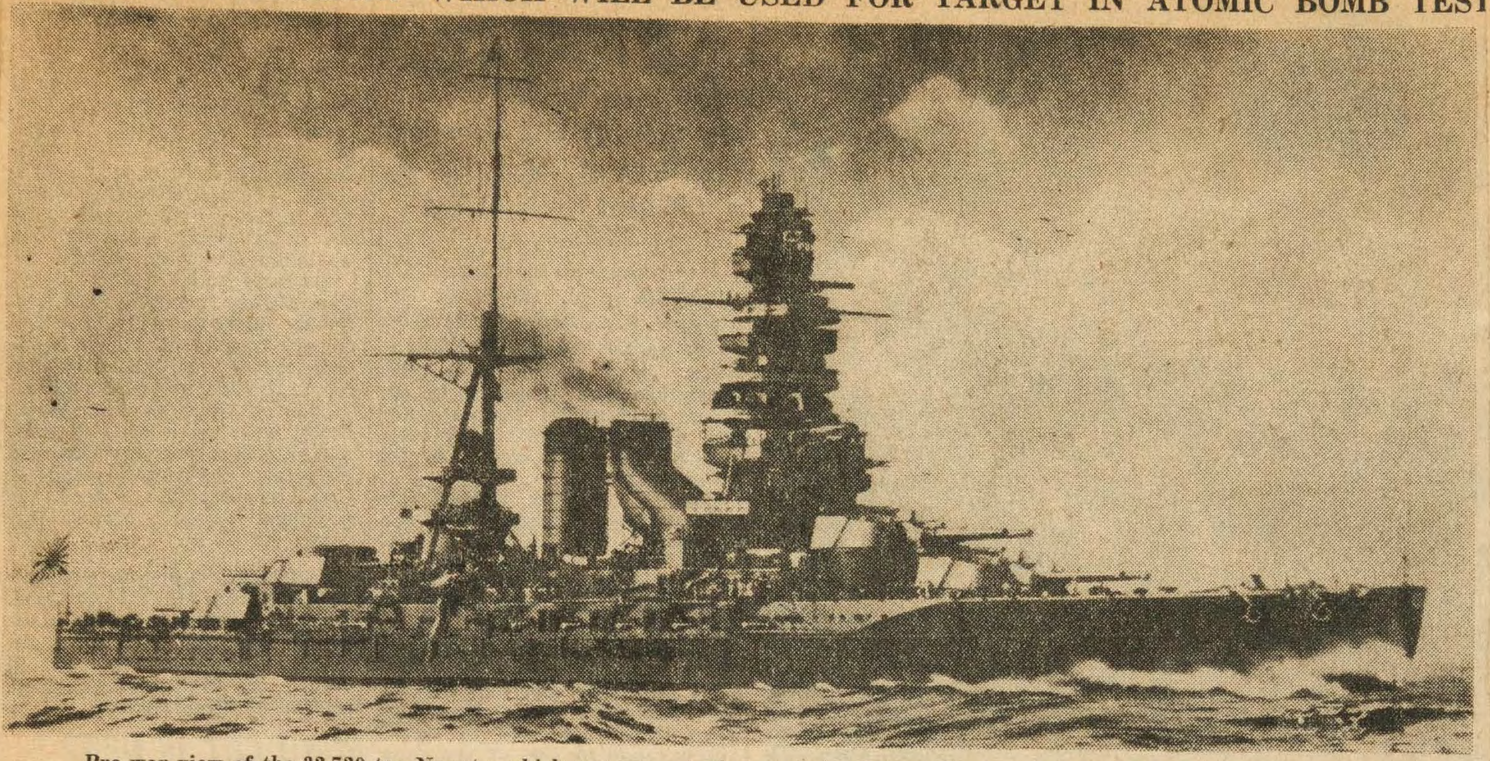
So great was the personnel problem of manning the Columbia laboratories that Robert F. Moore, '24E, secretary of Appointments at Columbia, was recalled from work as civilian recruiting officer for the Naval Ordnance Laboratory at Washington, D. C., for the Columbia part of the project.

When he arrived on the job early in December, 1942, there were approximately 200 physicists, physical chemists, and engineers working in the SAM laboratories in Pupin, Havemeyer, and Schermerhorn. During the final stages of the project, some 1,500 men were at work here.

Although it is not known exactly how many Columbia alumni were associated with the project, Mr. Moore estimated that they numbered at least several hundred. A considerable group of young engineers and technically trained alumni were connected with the production end of the work at the Hanford and Oak Ridge plans which grew directly out of the research started at Columbia, and many were also working at the one near Santa Fé. Moreover, students from all the late graduating classes in science were promptly absorbed into the laboratories.

One might almost say that the Columbia project had come full circle when it is considered that in the destructive bombing of Hiroshima and Nagasaki, five Japanese alumni in the former city and three in the latter, were probably destroyed. We may well hope that the talents of Columbia professors and alumni may assist as successfully in showing the world how to control the new instrument as the talents of Columbia scientists did in bringing it into existence.

JAPANESE BATTLESHIP WHICH WILL BE USED FOR TARGET IN ATOMIC BOMB TEST



Pre-war view of the 32,720-ton Nagato, which was put out of commission by our bombers before the surrender of the empire

The New York Times

U. S. Will Test Atomic Bomb On Enemy Battleship Nagato

32,720-Ton Vessel to Be Towed 500 Miles Off Japan—Effect of the Missile Over Water May Decide Navies' Fate

NYT

By FRANK L. KLUCKHOHN

9/17

By Wireless to THE NEW YORK TIMES.

TOKYO, Sept. 16—The 32,720-ton Japanese battleship Nagato, which withstood an attack by 500 United States Naval planes and which was taken over at the Yokosuka naval base after the war, will be towed 500 miles to sea to have an atomic bomb dropped upon her in an experiment that may determine the form of navies in the future world order.

That is the present plan of the United States Navy, which wants to ascertain these details: Whether the bomb will cause the destruction of a single ship; what it will do to a task force; what effect it will have on the water. The Navy hopes to obtain the answers in one of the greatest experiments of its type since Brig. Gen. William L. (Billy) Mitchell sank four warships from the air in the early Nineteen Twenties.

[On July 18, 1921, a squadron of Army planes under General Mitchell's direction sank the former German cruiser Frankfort off the Virginia coast, and two days later dealt the same fate to the former German dreadnaught Ostfriedland. On Sept. 5, 1923, off Cape Hatteras, Army Martin bombers sank the obsolete United States battleships New Jersey and Virginia, again under General Mitchell's direction.]

Reports from Hiroshima and Nagasaki indicate that the force of the explosion is up and out, not down. From the Navy's viewpoint, the most dangerous effect of the atomic bomb could be under water, where the pressure of water greatly magnifies the effect of a torpedo or a mine.

The Navy will invite the press to attend this experiment, as it did General Mitchell's effort.

Capt. Thomas J. Flynn of New York, executive officer of the U. S. S. Iowa, who took command of the Nagato Aug. 30, immediately upon his promotion from commander to captain, is removing all the Japanese personnel kept aboard for technical reasons.

United States personnel also will be removed and presumably the Nagato will be towed under escort. The bomb will be dropped within the perception of the modern, delicate, long-range detection devices present on all American warships.

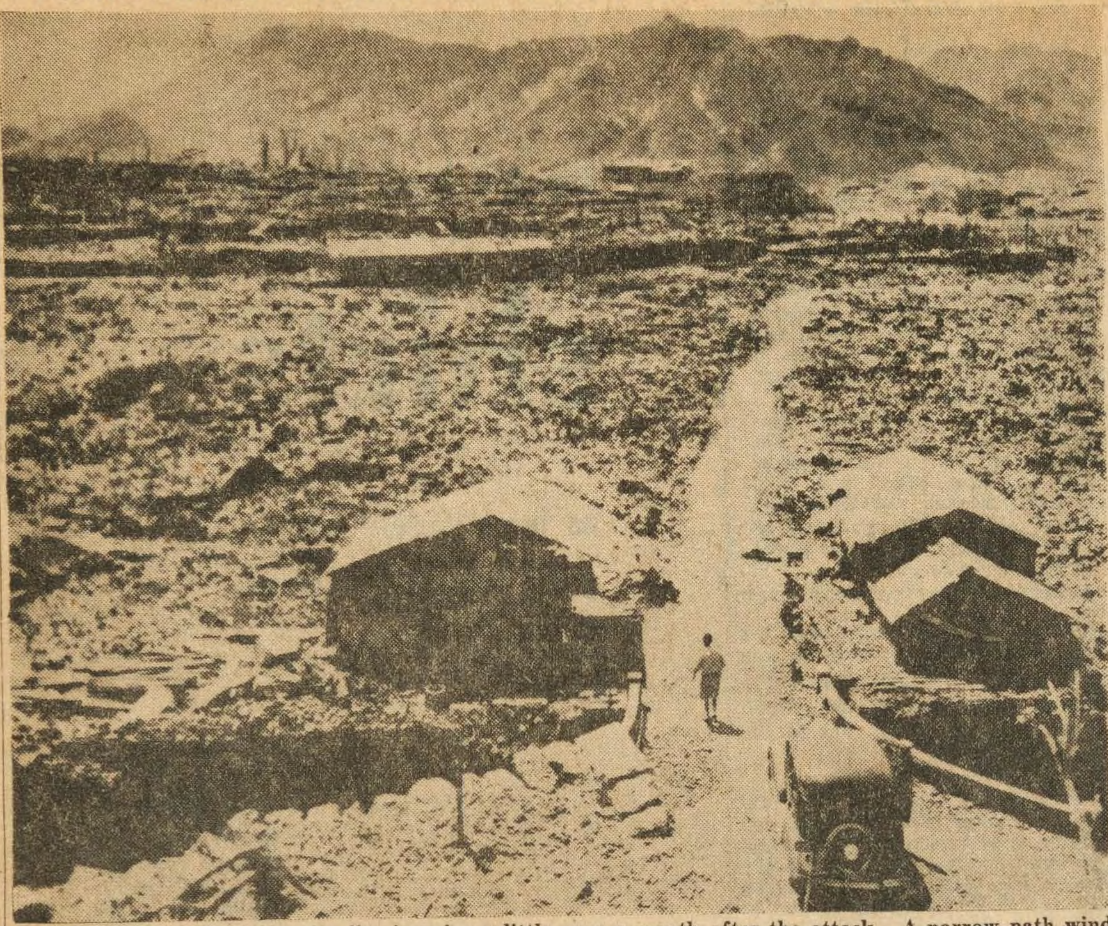
The "indestructible" ship of the Japanese Navy has been made ready for sea by an engineering crew of the destroyer transport Horace A. Bass. The Nagato suffered three direct hits July 18, but the fourteen-inch steel armor plate of her turrets withstood the blasts of Admiral William F. Halsey Jr.'s concentrated air attack. Her damage was extensive but superficial. Now she will stand her greatest test.

This experiment will exceed in potentialities the attack by British Lancasters carrying 12,000-pound bombs that sank Germany's battleship Tirpitz in Tromsoe Fjord, Norway, on Nov. 12, 1944. While our Navy always has contested the assertion of air power exponents that the plane has rendered the battleship obsolete, and while it has used these giants with effect in this war, General Mitchell's experiments did lead to a modification of naval concepts and of battleship design. Battleships have since undergone important structural changes designed to protect them from air attacks.

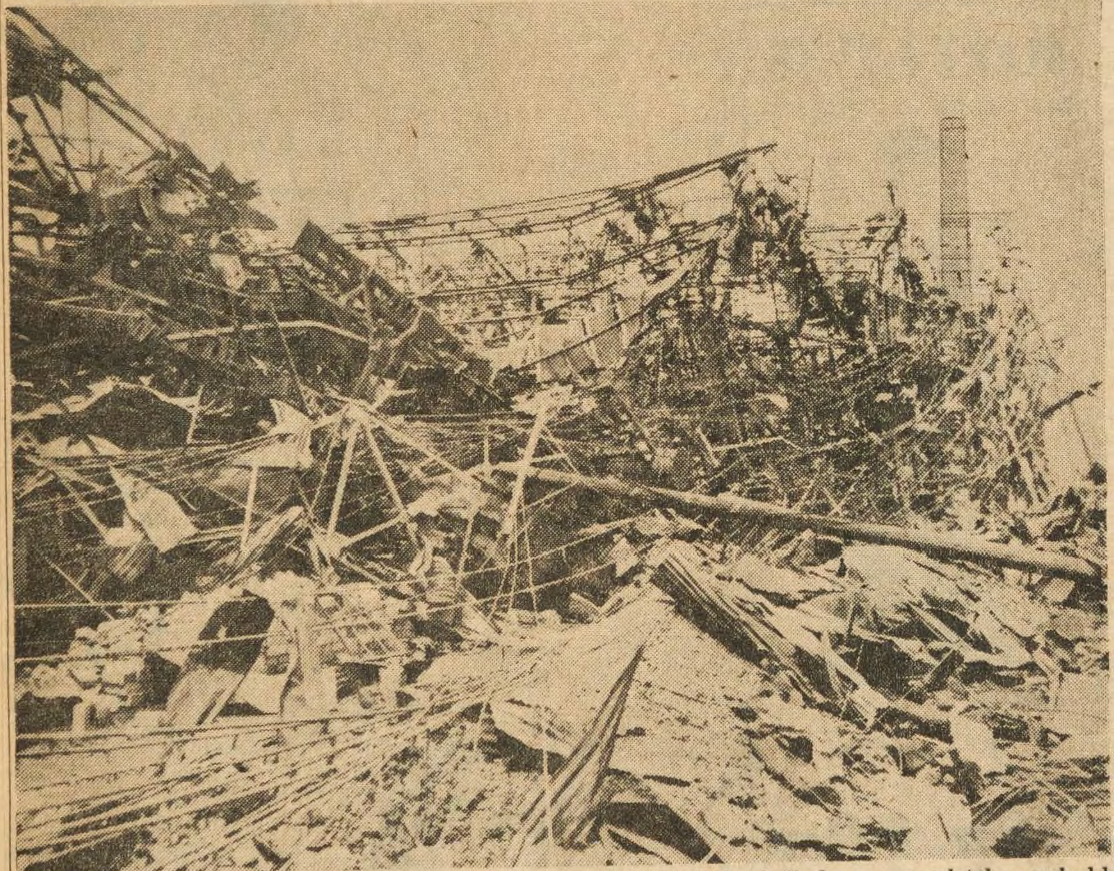
It is not known whether the atomic bomb at sea will have the same effect because of the wide area for expansion as it does on land targets, where hills or mountains concentrate its power. There is a tentative theory that the effect of the atomic bomb on water will be mitigated.

Catholic priests in Hiroshima said their lives had been saved because they were in a relatively airtight building that withstood the blast. On the other hand, the world's most terrible weapon vaporized the steel tower from which it was suspended in the initial experiment in New Mexico.

NAGASAKI AFTER IT FELT THE FORCE OF AN ATOMIC BOMB



The center area of the city lies in ruins a little over a month after the attack. A narrow path winds through masses of debris. Shacks in foreground were built from scraps of tin picked up by survivors.



Located a mile from the scene of the blast, the huge Mitsubishi Steel Works was completely wrecked by the powerful explosive.

Associated Press

INDUSTRY AID SEEN DUE TO ATOM BOMB

Many Developments Speeded in Emergency Are Available for Early Application

There are several thousand immediate applications for the products and procedures developed in creating the atomic bomb, it was disclosed yesterday with War Department approval by the Kellex Corporation. This is a subsidiary of the M. W. Kellogg Company, industrial engineering concern that helped engineer plants for development of the bomb.

The new applications will be available for industry upon Government release, it was declared by H. R. Austin, executive vice president of M. W. Kellogg Company, and A. L. Baker, general manager of Kellex, at a luncheon at the Biltmore Hotel, at which announcement was made that the Kellex Company had received the Army-Navy E.

Among the industries that may avail themselves soon of the knowledge gained in working out the diffusion process of extracting U-235 from natural uranium are petroleum refining, general chemical and processing, manufacture of pressure and vacuum vessels, gas processing, electrical industry, refrigeration, users of corrosive chemicals and the medical profession, they asserted.

New Contributions Revealed

More new instruments to observe and control the atomic bomb project were created than had been built in all history prior to that development, Mr. Baker said. A porous "barrier" was developed with billions of holes of less than two-millionths of an inch, able to withstand a pressure of one atmosphere with a requirement of uniform spacing and size of pores that would not become enlarged or plugged by corrosion or excluded particles. Almost at the last minute a barrier was developed that operated successfully throughout the several thousand stages required to produce U-235, he revealed.

Pump development made such headway over previous knowledge and products that it alone may well represent more gain to industry than the entire $2,000,000,000 cost of the project, Mr. Baker said. Hardly less important, he asserted, were the essential "leak-detectors" that will bring about widespread use in dangerous and complicated industrial processes.

The technical advances that can be accomplished through atomic power itself may take years to prepare, however, and there will of necessity be complete preservation of the secret of the bomb in every particular, it was said in a memorandum made public by the corporation.

Early Benefits Seen

Industry does not have to wait for atomic power to utilize the experience of the project, it was declared. It cannot all be revealed in print at present, but it is in the minds of engineers and concerns participating in the project and is expected to be bound up with their future thinking, engineering design, construction and processing.

With respect to medicine, the memorandum declared it will benefit from a low cost, more abundant source of radioactivity, improved protective methods for combating toxicity in industry, and extension of cancer therapy. "Most of the advantages still are necessarily under Government wraps, and the principal building of the diffusion plant at Oak Ridge, Tenn., houses the largest chemico-physical continuous process in the world," Mr. Baker said. "It is a single process employing more pumps, more carriers, more power, more people, more instruments, more of every process-essential than ever had been thought of before."

British Atom Bomb Unit Sails on Aquitania; Many Evacuees Among 450 Civilians Aboard

Dr. John P. Baxter, British chemical engineer who worked on the atomic bomb at Oak Ridge, Tenn., was among 450 civilians who embarked yesterday on the Aquitania, which will sail from Pier 90, North River, at 8 A. M., today.

The British scientist, returning to England permanently, had been employed by Imperial Chemical Industries and was lent to the British Government for work on the atomic bomb. In his party were Arthur G. Jones and Harold E. Evans, also atomic bomb experts. All were accompanied by members of their families.

The party leaving on the Aquitania was the largest outbound since V-E Day. In addition to the civilians, 352 members of the Royal Air Force, fifteen British naval officers and thirty-four soldiers of the British, French and Dutch Armies were aboard. About three-quarters of the civilians were women and children who had been evacuated to this country about five years ago. A number of the children spoke with American accents, and one with a southern drawl. Several of them were vehement in expressing reluctance to leave the United States and go back to England.

Supreme Headquarters as commander of naval ports and bases in Germany. He later became head of the naval division of the Allied Control Council for Germany.

NYT 9/19

CAN THE SECRET BE KEPT?

The atomic bomb has raised an issue between the physicists and the statesmen. All the distinguished scientists who participated in developing the bomb and who have been heard from thus far declare that in two, three or at most five years any industrial nation with brains and money enough—and brains and money are always found in industry—can develop its own bomb on the basis of the extant literature. In our own case, President Truman has placed in the public domain all Government-owned land on which there are uranium ores—a forerunner of legislation that Congress will surely enact and of some international understanding which will cover the mining of uranium ores wherever they may be found. We can leave the issue neither to the physicists nor to the legislators. If there is any practical policy to prevent the use of atomic bombs by some ruthless aggressor, surely it ought to be framed jointly by scientists and statesmen.

For the time being, atomic bombs can be loaded only with material obtained from uranium ores. By possessing ourselves of ores on our own public land we cannot prevent other nations from developing their own bombs. Uranium ores are widely distributed. It is probable that geological prospectors will discover more. Since control of uranium deposits is ruled out, the alternative would seem to be for the nations of the world to consent to the periodic inspection, by the technicians of an international board, of all plants in which uranium is used. It so happens that a plant in which uranium is extracted for use in bombs is so enormous and that so many workers are required that concealment is impossible. In war we managed to evade questions about our own plants at Oak Ridge and Pasco, but in peace no country could do so indefinitely.

As yet there is no possibility of extracting uranium from its ores and making bombs in some corner laboratory. What may happen fifty years hence, when energy will be released from water or dirt, it is much too early to predict. Even if this next step is taken sooner than now seems possible, periodic inspection by consent is still worth consideration. But always the question of the use and abuse of atomic energy must be determined. Compressed air can drive a torpedo or a rock-drill; an explosive can blast a railway tunnel or destroy a city. The line between legitimate and illegitimate experimenting with atomic energy will be difficult to draw.

That it should be necessary to discuss the greatest achievement in science and technology of our time in these terms is enough to sadden anyone but the most cheerful optimist. The world has been enriched with a discovery and an invention which should be hailed as the dawn of a new era, yet, for the moment, we can think chiefly of death and destruction. The only crumb of comfort that can be extracted from the situation in which we find ourselves is the growing realization that this world cannot risk a global war waged with atomic explosives.

DECRIES ATOM SECRECY

9/20

Dr. Gideonse Wants Us to Share Discovery With Humanity

NYT

Declaring that the way for the United States to prove leadership is to keep open the channels through which leadership was achieved, Dr. Harry D. Gideonse, president, officially welcomed 1,460 Brooklyn College freshmen yesterday at a special assembly in Roosevelt Hall.

In quoting from the 1939 report of the Rockefeller Foundation, which told of the European advances in the splitting of the atom, Dr. Gideonse said that nothing would be achieved by closing doors and by "scientific tariff-mindedness." He severely criticized the idea of preserving "secrets," holding that in this country present leadership was gained through the aid of contributions from scientists everywhere.

"The atomic bomb is to humanity what DDT is to fleas and mosquitos," the Brooklyn College head said. "It has telescoped time and questions that might have called for answers in a decade or so before atomic energy became available are now in an immediate 'do or die' category."

Scoffs at Bomb Secrecy

HT

British Scientist Says Any Nation Could Split Atom

9/18

From the Herald Tribune Bureau

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LONDON, Sept. 17.—One of the scientists responsible for the development of the atom bomb, Professor M. E. Oliphant, of Birmingham University, declared today that there is no defense against it, that the principles on which it is based are well known to every one, and that any idea Great Britain and the United States may have of keeing the process secret is "just rot."

Professor Oliphant said any industrial country could have the bomb in five years, and any determined industrial country could do it in two.

SEES OVER-OCEAN BOMB

Sen. Tydings Warns of Nations Sharing Atomic Secret

BALTIMORE, Sept. 2 (AP)—Senator Tydings of Maryland said last night that he had been informed by eminent scientists that it would be possible to put an atomic bomb in a projectile and fire it across the Atlantic.

In a speech before the annual reunion of the Twenty-ninth Division Association, he said it was necessary for all "to stimulate their imaginations because we are playing with things that God hitherto kept to himself."

He asserted that five or six other nations would be producing atomic bombs at the end of a year or two and that it was up to the United States to find ways and means of creating friendships between nations to prevent "a push button war that will be over before most people will know it began."

Atom Bomb Use Called a Crime

NYP 9/18

London, Sept. 18 (AP)—A protest against the "crime" of using the atomic bomb against Japan was signed and circulated today by 31 Britishers, mostly preachers, writers, musicians and teachers.

The protest asserted the bomb was a "further deliberate violation of the principles of sacredness of human life upon which Christian civilization and democratic society alike have been based and reduces to hypocrisy the self-constituted right of Allied nations to put 'war criminals' on trial."

Signers included Lady Pethick-Lawrence, wife of the Secretary of State for India; the Rev. Reginald Sorenson, Laborite member of Parliament, and F. Lewis Donaldson, Archdeacon of Westminster.

Big Navy Urged to Rule Ocean in Atomic Era

By the Associated Press.

WASHINGTON, Sept. 19.—Postwar control of the seas with a Navy capable of "delivering atomic bomb attacks" was urged today by Navy Secretary James V. Forrestal before the House Naval Committee.

Testifying on legislation to determine the size of the peacetime Navy, Mr. Forrestal said the key to future victory and to the freedom of this country "will be in the control of the seas and of the skies above them."

Specifically, he recommended:

An active fleet, ready for battle, consisting of approximately 300 modern major combatant vessels including 11 battleships, 15 aircraft carriers including three 45,000-tonners, 21 escort carriers, 20 heavy and large cruisers, 29 light cruisers, 176 destroyers, 40 destroyer escorts and 90 submarines in addition to supporting craft.

All New Ships.

All the battleships, carriers, cruisers, destroyers and submarines would be new ships completed since 1940.

A laid-up reserve of seven old battleships, 22 carriers built since 1940, 58 escort carriers, 14 heavy cruisers, 91 light cruisers, 191 destroyers, 257 destroyer escorts, 110 submarines and supporting craft.

"A ready reserve" of 100 additional major ships.

Mr. Forrestal and Adm. of Fleet Ernest J. King, chief of naval operations, were called as principal witnesses.

Mr. Forrestal said no one knows what effect the atomic bomb will have on modeling navies, but emphasized that the United States Navy intends to adapt it to carrier-based planes.

Would Lose Control.

While immensely destructive, he said, the atomic bomb "is still a bomb, requiring land or carrier-based planes to deliver it." And the best defense against it is "in intercepting air power."

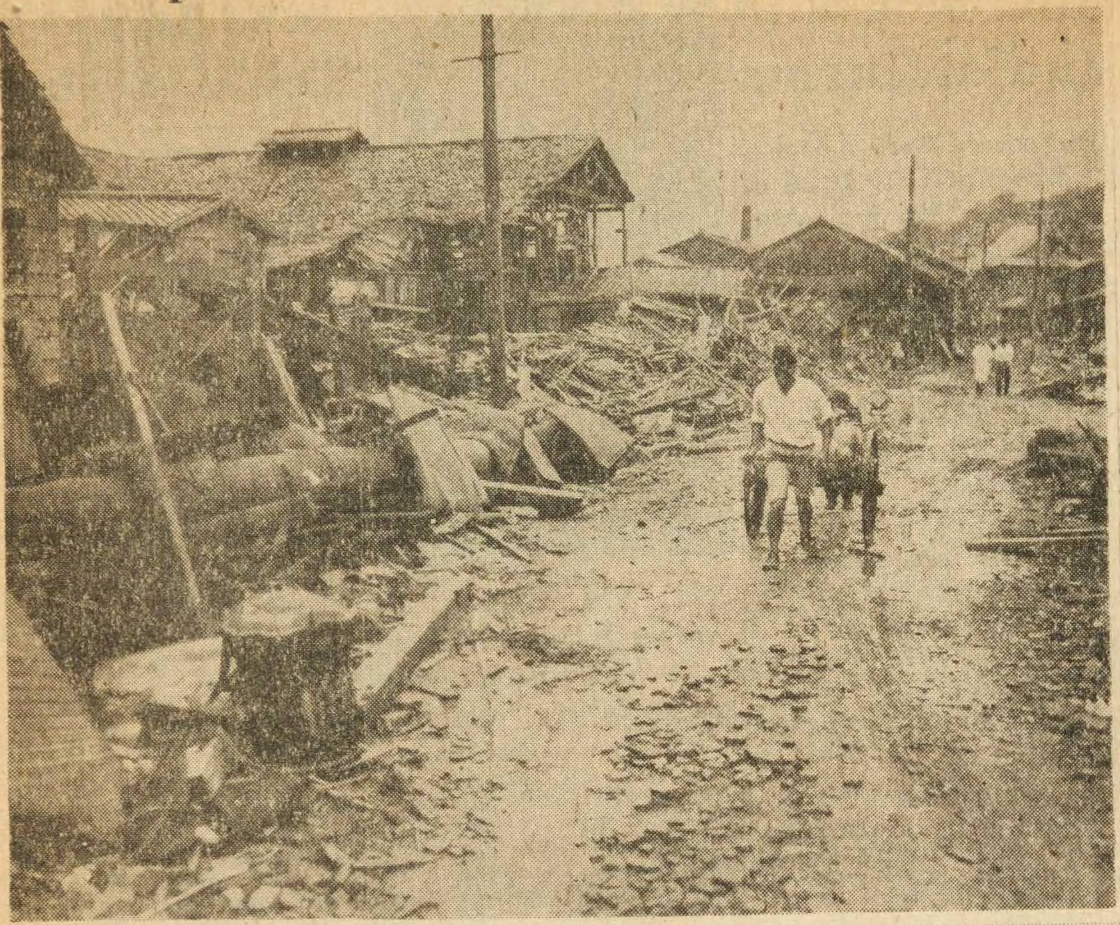
"If we were to give away our fleet and rely wholly on the bomb, we would lose control of the sea," he said.

Mr. Forrestal estimated that "something less than 12,000 planes" and total personnel of between 500,000 and 600,000 officers and men, exclusive of the Marine Corps, could man the Navy he outlined.

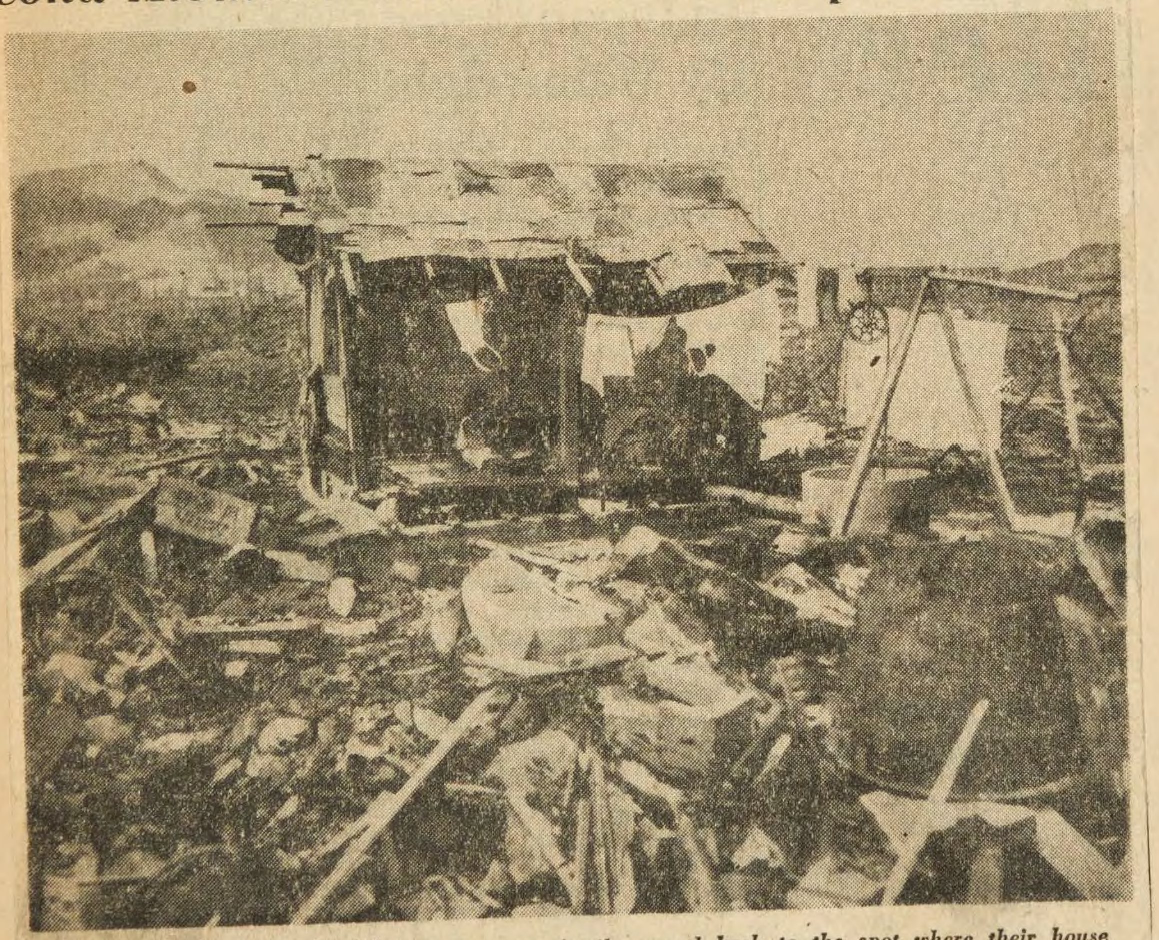
He suggested establishment of these major Pacific naval bases:

Kodiak and Adak in the Aleutians, Hawaii, Balboa in the Canal Zone; Guam, Saipan and Tinian in the Marianas, the Bonin-Volcanic islands; "perhaps the Ryukyus"; in the Admiralties "if Australia will grant us the right to a base there" and the Philippines.

Close-Ups of Destruction in Nagasaki After Second Atomic Bomb Attack on a Japanese City



This suburban section of Nagasaki was left almost as badly damaged as areas in the center of the city, four miles away



A Japanese family moved back to the spot where their house stood, erecting this crude shack from pieces of tin lying about

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ATOMIC BOMB WORKER DIED 'FROM BURNS'

NYT 9/21

LOS ALAMOS, N. M., Sept. 20 (AP)—The Government's atomic bomb laboratory disclosed today, in reply to an inquiry, that a worker died Sept. 15 "from burns in an industrial accident" on Aug. 21. He was identified as Harry K. Daghlian, 24, New London, Conn., a Purdue University instructor prior to coming here in November, 1943.

A project spokesman said today that scientists at the atomic bomb laboratory were opening a spare-time university next week for hundreds of young military and civilian personnel assigned at Los Alamos.

Eighteen courses are to be offered in fields of chemistry, mathematics, physics and metallurgy, "regular courses students would take in college" rather than instruction in atomic bomb principles.

Hans A. Bethe of Cornell heads the university committee as chairman. Among those expected to teach are Enrico Fermi, a Nobel Prize winner in physics.

Did Atom Bomb Help End War? Generals Differ

LeMay Says No, Groves Yes; Truman and Senators Discuss Atomic Future

HT 9/21

From the Herald Tribune Bureau

WASHINGTON, Sept. 20.—Two high-ranking generals expressed opposite views today on the effect of the atomic bomb in hastening the surrender of Japan, while President Truman discussed the future of atomic energy with a group of Senators who are preparing for a comprehensive study of the subject.

In the Pentagon Building, conflicting statements flew back and forth. Major General Curtis E. Le May, commanding general of the 21st Bomber Command, said flatly at one press conference that the atomic bomb "had nothing to do with the end of the war." He said the war would have been over in two weeks without the use of the atomic bomb or the Russian entry into the war.

Later, however, in another press conference, Major General Leslie R. Groves, who had charge of the development of the atomic bomb project, smiled when he heard of the Le May opinion and pointed out that the Japanese, when notified of the Potsdam declaration of July 26, said it was unworthy of notice.

"After the atomic bomb dropped, the Japanese attitude changed immediately," General Groves recalled. "I think that is significant."

Asked whether the atomic bomb hastened the end of the war, General Groves said: "Yes, of course it did."

Present at the White House conference were Senators Tom Connally, Democrat, of Texas; Arthur H. Vandenberg, Republyican, of Michigan, and Scott W. Lucas, Democrat, of Illinois. They were named as a subcommittee yesterday by the Senate Foreign Relations Committee to confer with President Truman on the advisability and possibly the scope of a Congressional study of means of controlling the atomic bomb and related matters. No details of the White House conference were made public, but Mr. Truman was understood to have approved the study. Representative William J. Gallagher, Democrat, of Minnesota, told the House, meanwhile, that he "does not think members of Congress are capable of handling it."

Representative Clare Boothe Luce, Republican, of Connecticut, warned House members that the nation had better begin to "go underground" to protect itself against possible future atomic bomb attacks that may come without warning.

TURDAY, SEPTEMBER 22, 1945.

KEEP BOMB SECRET, GEN. GROVES URGES

NYT 9/22

Officer in Charge of Weapon's Development Honored Here —Sees Peace Guarantee

Complete United States control of the secret of the atomic bomb, at least during the next few years, was urged here yesterday by Maj. Gen. Leslie R. Groves, officer in charge of the weapon's development, as the city paid tribute to him for having "accomplished the impossible."

General Groves sounded his warning against sharing the bomb's secret at three ceremonies during the day. The first was at City Hall, where Mayor LaGuardia and other city dignitaries honored him for his work; the second was at a luncheon in the Waldorf-Astoria, and finally at a press conference during which he discussed the bomb.

Projecting himself into the current controversy over whether to share the bomb with other nations of the world, he told 200 city officials, scientists and industrialists at the luncheon given by the International Business Machines Corporation that "this weapon must be kept under control of the United States until all of the other nations of the world are as anxious for peace as we are."

"And by 'anxious for peace,' " he adde, "I mean in the heart and not by speech or signature on a treaty which they do not intend to honor."

Hopes it Won't Be Used Again

Although the bomb means complete victory for us, General Groves said he hoped it would never be used again.

Keeping the secret, temporarily, he said, will be possible because it will take other nations years to develop the bomb. The scientist, he said, feels that other nations can duplicate our work in two to five years "and the more they talk the shorter the time seems to get." But, he emphasized, they are thinking of science and a theory and not of building and operating a plant.

Answering criticism over use of the bomb, General Groves declared that while it did not win the war, it most certainly ended it. The effect of this ending, he said, was to save American lives as well as Japanese lives in the long run.

"As I look at the pictures of our men coming home from Japanese prisons and hear second-hand accounts and first-hand accounts of the experiences of the men who made the march from Bataan, I am not particularly worried about how hard this weapon hit the Japanese."

The Japanese surrendered because the bomb was unendurable, he continued, pointing out that these terrific effects demonstrated in Japan can be a force for peace in the future in that they can be used as a "diplomatic bargaining point" that will lead to the opening up of the world so there will be no opportunity for a nation to arm secretly.

Cites Veil of Secrecy

Paying tribute to the scientists, industrialists and workers who toiled over the project, General Groves reviewed the history of the bomb's development. Shortly before it was completed, he disclosed, a Congressional committee inspected some of the plants, "but they didn't even tell their wives."

At the press conference, General Groves suggested keeping the bomb as an American secret, that the entire question be turned over to some agency selected by Congress for that purpose.

The President, he continued, has promised to submit legislation to Congress on control of the bomb. When that legislation comes, it will be up to the people charged with the bomb's future to decide what should be disclosed, he said.

"Until then, though," he warned, "the War Department is not giving out any more information."

The atomic bomb plants, the general said, still are in operation, though with reduced forces. As to peacetime uses of atomic power, he admitted that "we don't know how practical it is."

Sitting with General Groves was Brig. Gen. Thomas F. Farrell, deputy officer in charge of the atomic bomb project, who had just returned from Japan. He described the scenes of utter devastation at Hiroshima and Nagasaki, where the two bombs fell.

Gets Certificate of Gratitude

Before the luncheon, General Groves and his staff were received by Mayor La Guardia in his office at City Hall. There, in the presence of 300 officials, the Mayor presented to the general a certificate expressing the gratitude of the people of New York for his "having accomplished the impossible."

The Mayor, who also spoke at the luncheon for General Groves, congratulated him and his staff for their work. In responding, General Groves sounded his keynote for the day—"that if this nation controlled the atomic bomb for a few years until other nations are prepared to share it, we will go a long way toward preserving universal peace."

The general reached the city at 11 A. M. with his wife and daughter. After a brief ride through Central Park, accompanied by Grover Whalen, he went to City Hall, where he was greeted by a crowd of 5,000 persons.

ATOMIC BOMB PROJECT DIRECTOR HONORED

Maj. Gen. Leslie R. Groves receiving a scroll from Mayor La Guardia

The New York Times

NIMITZ FINDS NAVY VITAL TO NEW BOMB

NYT 9/22

Atomic Weapon's Use to Rely on Seapower for 'Many, Many Years,' Admiral Says

By CLINTON GREEN

By Wireless to THE NEW YORK TIMES.

PEARL HARBOR, Sept. 21—Fleet Admiral Chester W. Nimitz, in what may have been his last press conference as Commander in Chief of the Pacific Fleet, looked today at the future role of the Navy in light of the discovery of the atomic bomb and declared he could see no lessening of the importance of sea power in the make-up of United States military forces.

Admiral Nimitz said he did not know what the future held in possibilities that the atomic bomb might be guided from the West Coast, Alaska or the Hawaiian Islands through the rocket principle, and he pointedly emphasized that it would be foolish to say that such things could not be done.

"For many, many years to come any use of the atomic bomb is going to depend on planes, and planes depend on sea power's securing and holding bases for them," the admiral said. "I don't see how you can dispense with sea power. Wherever you would launch bombs from, you would need ships to take the atomic bomb supplies there. It's just another weapon and we still must rely on sea power."

Looking back on nearly four years as Commander in Chief of the fleet that took United States forces across the vast stretches of the Pacific from Pearl Harbor to Tokyo Bay, Admiral Nimitz said that the most critical period of our operations came between May and September, 1942, but after the battles of Midway and the Coral Sea in this period "it just became a question of time."

The admiral said that he had moved his headquarters back to Pearl Harbor from Guam because, with the shooting ended, "the biggest problem is orderly demobilization of personnel," and, moreover, he wants to consolidate his staff and start demobilization of that group; after demobilization will come a roll-up of our Pacific installations to save as much money and matériel as possible.

"I wish to give assurance through your group [the correspondents] that we are going to speed up the efforts to return personnel to the West Coast and their homes," the admiral said. "We are using escort carriers as transports. Every combatant ship going to the West Coast is loaded to the limit of its capacity. We recognize our obligations to the people of the United States and the parents of these fine men, but it must be done without prejudice to the very important occupation [of Japan]."

Admiral Nimitz said in answer to a question that his personal plans were concerned with supervising this roll-up, but he remarked that he had read in the newspapers that he was going to report to Congress on Oct. 5 and that beyond that "I don't know." There has been speculation that he is going to succeed Fleet Admiral Ernest J. King as Chief of Naval Operations and Commander in Chief of the United States Fleet.

The admiral took the opportunity of adding his voice to those insisting that Japan had been defeated before the atomic bombings and Russia's entry into the war. He said the enemy had made the mistake of spreading his forces too thin. The Japanese should have concentrated on one objective, such as destroying United States sea power, the admiral said.

Admiral Nimitz said that the present plans of Admiral William F. Halsey, commander of the Third Fleet, include the taking of that fleet to the West Coast, where it will represent the Navy on Navy Day, Oct. 27. The two admirals conferred just before the press conference, but there was no opportunity for the correspondents to talk with Admiral Halsey, who reports say is going to retire from the Navy.

PLEA TO GIVE SOVIET ATOM SECRET STIRS DEBATE IN CABINET

No Decision Made on Wallace Plan to Share Bomb Data as Peace Insurance

ARMED FORCES OPPOSED

NYT 9/22

Proponents Argue Russia Will Have Weapon Soon Anyway —Conflict in Senate Bills

By FELIX BELAIR Jr.

Special to THE NEW YORK TIMES.

WASHINGTON, Sept. 21—A proposal sponsored by Secretary of Commerce Henry A. Wallace that the United States, Britain and Canada reveal the secret of the atomic bomb to Russia was discussed at President Truman's Cabinet meeting today and brought about a pointed debate that ended with no decision after having caused the longest Cabinet session of the present Administration.

It is understood that the question as to what should be done with the atomic bomb secret was brought up by President Truman and evoked from Secretary Wallace ardent advocacy of the proposal that Russia be let in on the secret, and soon. Secretary of War Henry L. Stimson, who was present for the last time at the two and a half hour meeting, is said to have suggested that disposition of the question be put up to a world body to be established at some future date.

Although Mr. Wallace is not alone in his support of the proposal, it is believed that President Truman will give the matter deep consideration before according it his backing even if it should be acceptable to Britain and Canada.

Army-Navy Opposition

It is known that the Army and the Navy are determined in their opposition to revealing the secret to any but the nations that participated in its perfection. The two services are prepared to resist the proposal to the hilt, at least until such time as an antidote has been perfected by the United States.

Mr. Wallace, it is understood, argued in support of his proposal that now is the time to make a real start toward a working world union through a demonstration of good faith to the Soviet Union. Those who share the Secretary's view contend that as a result of turning the secret over to Russia that nation would be placed under a perpetual moral obligation never to use the atomic bomb against any of the Allied conquerors of the Axis powers.

The proposal, understood to have been discussed in President Truman's official family for the first time today, is based on the further and major premise that any nation as far advanced scientifically as Russia will learn the secret of the bomb in the not far distant future anyway.

It is the contention of the Wallace adherents that since this is inevitable, the United States, Britain and Canada should move quickly to bring the Soviet Union into full play as a force for perpetual world peace rather than as a continuing question mark in all United Nations discussions. Now is the time, it is insisted, to end the suspicions with which the Russians are known to regard the intentions of Britain, if not of the United States.

Against these considerations are the tough-minded strategists and not a few scientists in the War and Navy Departments, who have told President Truman that Russia would be so long in developing the atomic bomb that this country and Britain would by that time have discovered an antidote.

Strengthening their arguments, understood to have been laid before the President during the Cabinet meeting, was the statement in New York today by Maj. Gen. Leslie R. Groves, who was in complete charge of the "Manhattan Engineer District," as the Army atomic bomb project was designated, that the United States should closely hold the secret of the bomb until all other nations have demonstrated their anxiety for peace.

Entirely aside from these military considerations, however, are strong arguments advanced by nonmilitary officials that now is not the time to let Russia in on the secret. They have urged strongly that any thought of disclosing the secret should be postponed until the various peace settlements have been finally determined.

These nonmilitary officials contend that, leaving aside the dominance that the atomic bomb secret gives the United States and Britain in the current discussions, injection of the matter into the Big Five talks now or at any time before the peace is finally written would only complicate the negotiations.

President Truman, as the final arbiter in United States foreign relations, in the last analysis must decide whether the secret is to be revealed to Russia or any other country. Many observers believe that Mr. Truman, even without prompting by the War and Navy Departments, would be the last to give his approval to the Wallace proposal until a working world order had been attained.

Secret Kept at Potsdam

It was recalled in connection with the Cabinet discussion that President Truman refused to reveal the atomic bomb secret to Generalissimo Stalin at Potsdam, although he might easily have done so. He had the secret in his pocket at the time. It was on his return trip to this country from Potsdam that the President announced the bomb's first use upon Hiroshima.

The President took the position at Potsdam, according to those who know his mind best, that Generalissimo Stalin had withheld from the United States details of some of the Soviet Union's best secret armaments at a time when the United States needed them most, and hence he could with complete justice hold out our greatest secret.

The Russians' insistence on the utmost secrecy regarding their weapons and plans for military operations has been one of the legends of this war and one of the biggest thorns in the side of the Army General Staff. Armament experts contend that during much of the war Russia had rocket guns, tanks and a few field pieces that were superior to ours and refused repeated overtures by us and the British to obtain their secrets.

Nor is the fact overlooked by observers that President Truman is a veteran of World War I who has something more than a wholesome opinion for the views of the Army General Staff.

Moreover, the President has already let it be known that he intends to leave it to Congress to decide to whom and at what time the atomic bomb secret is to be revealed. This consideration, however, does not alter the fact that Congress will look to Mr. Truman, as spokesman for the executive branch as well as helmsman of United States foreign relations, for recommendations before taking action.

A guide to the President's course came in two developments today on Capitol Hill, where the Senate Military Affairs Committee reported out a bill by Senator Elbert D. Thomas, Democrat, of Utah, establishing a commission on atomic energy, which would formulate policies on its use and development.

Connally Is Annoyed

When Chairman Tom Connally of the Senate Foreign Relations Committee heard of the committee action he appeared to have difficulty in restraining himself. He referred to it as "precipitous and premature" and revealed that the President only yesterday had expressed his preference for the bill by Senator Arthur H. Vandenberg, Republican, of Michigan, setting up a "board" to develop, control and supervise the use of atomic energy and the manufacture of materials by that method. Senator Connally significantly added his own opinion that "complete secrecy should be maintained regarding the atomic bomb."

The chief difference between the Vandenberg and Thomas measures is that while the former would provide a board of investigation to recommend to Congress what disposition should be made of atomic energy and its uses, the latter would set up a permanent commission that would remove the matter from direct Congressional control.

Senator Connally's statement seemed to make it certain that there would be no Congressional action on the subject until the President sent up his message, notwithstanding the fact that the Thomas bill would have preference on the Senate calendar.

The general supposition was that the majority leadership would hold up any floor action on the Thomas measure until the President's message had been received and would move to substitute the Vandenberg bill or one like it to carry out the proposals made by the President.

The President's attention was centered on the atomic bomb question earlier today when Chairman Hatton Sumners of the House Judiciary Committee sought Mr. Truman's views on a measure he introduced that would subject to trial by jury anyone disclosing atomic secrets. The measure would authorize imposition of the death penalty if, in the opinion of the jury, that sentence was warranted. The only intimation of the President's attitude on the Sumners measure was Mr. Sumners' statement on leaving the White House that he had had "a very satisfactory conference with the President."

WILSON FEARFUL OF SOVIET POWER

NYT 9/23

British Field Marshal Is Sure Russia Will Master Atomic Bomb Secret in 5 Years

REGRETS CUTS IN U.S. ARMY

Washington-Moscow Parity Is Dissolved, He Says—London Foreign Office View Cool

By North American Newspaper Alliance.

WASHINGTON, Sept. 20—Field Marshal Sir Henry Maitland Wilson, Chief of the British Joint Staff Mission in Washington, said in an interview today that Soviet Russia "will have" the atomic bomb within five years.

She can develop it in that time if she goes to work on it, "as naturally, she will," he said.

That discovery, the field marshal said, would establish the Soviet Union unchallengedly as the most powerful nation in the world. "At the moment," he said, "there are two great military powers in the world—the United States and Russia."

He said this parity would be dissolved by the current trend in the United States toward slashing the Army, a transition over which he seemed gravely concerned. "By withdrawing its occupation forces on a large scale and by limiting drastically the size of its future draft," Field Marshal Wilson continued, "the United States is leaving the field alone to Russia."

In expressing this view he appeared to be extending his advice in the present Congressional debate on the draft and to be sharing the opinion in high military circles in the United States.

Status of Balkans Disturbing

The field marshal felt that possession of the atomic formula by Russia might very well rule out a war of the nations among whom the secret was known, at least a war in which the atomic bomb would be employed, although it would not rule out wars of considerable magnitude short of that.

"Any intelligent nation will know that to utilize the atomic bomb will be tantamount to self decimation," he said.

Field Marshal Wilson was concerned by what he described the "middle ground" in which territorial acquisitions could be made by Russia as the world scene might shape up. "I am very worried about the Balkans," he said. "With the United States curtailing its military influence in Europe," he said, "there is nothing to prevent Russia from becoming master of that area."

Field Marshal Wilson said he did not think that Russia was presenting any evidence of a tendency to subtract from the size of her army, similar to the trend in the United States. "Her great army is being maintained," he said. "I cannot see why there is all the talk of security by Russia and all the demand for bases unless she is bent upon territorial gain.

Russia Respects Power

"Stalin has said that he respects power," the field marshal went on. "And he does. By making itself weak, the United States will not gain in the respect of Russia. Stalin will seek to dominate where-ever he can."

The Briton took some solace from the existence of the English Channel, which, he said, had saved England before and "might do it again." The United States, he said, could be "especially thankful" that it was bordered by two oceans. The problem, he admitted, was not the same entirely for the United States and Great Britain.

Asked if he thought the time would ever come when armies could be dispensed with, the field marshal answered: "Under certain circumstances, we could get along without national armies, with merely an international police force, which I think we shall always need, as we need a local police force in our communities."

An international police force could be achieved satisfactorily, he concluded, only if there were, including the press, free movement in all countries, Russia as well, in order that a check could be made on scientific production in the countries that had made commitments for the peace.

Whitehall Issues Disclaimer

LONDON, Sept. 22 (AP)—A Washington dispatch that quoted Field Marshal Wilson as having expressed fear of Soviet influence in Europe was carried prominently in the London press today, along with a British Foreign Office disclaimer of any opinions he might have expressed. The Foreign Office statement said:

"A full version of this interview, upon which Field Marshal Maitland Wilson has been asked to report, has not yet been received, but in the meantime it can be stated that any opinions which the field marshal may have expressed in this interview are, of course, purely personal and do not represent the views of His Majesty's Government."

The Daily Express headline was: "'Jumbo' Wilson Sensation." Many other newspapers played up the story on their first pages. Most of them carried messages from Washington stating that the marshal had been misquoted.

The London Star said editorially: "Whether or not Field Marshal Wilson mentioned Russia in his newspaper interview, he should be officially kicked by Whitehall. For he had no business to talk at all. As head of a military mission, it is no part of his job to air his views in the American press. We suffered much during the war from garrulous generals. Their chatter seldom helps the cause of amity among nations."

SENATORS RUSH BILL ON ATOMIC CONTROL

NYT 9/23

WASHINGTON, Sept. 22 (AP)—The Senate Foreign Relations Committee will rush to the floor next week legislation designed to give Congress a voice in fixing atomic bomb policies. Chairman Tom Connally, Democrat, of Texas, said today he might call the committee Monday afternoon or Tuesday to act on a bill by Senator Arthur H. Vandenberg, Republican, of Michigan.

The Vandenberg measure, which already received a nod of approval by President Truman, would set up a joint Senate-House committee with exclusive jurisdiction over all measures dealing with the development, control and future use of nuclear energy. The plan, as Senators have outlined it, is to name a "responsible" group of six Senate and six House members who would act originally for Congress in a matter that threatens to provoke wide controversy.

Senator Connally told reporters he thought Congress, as a representative of the people, must share in the shaping of future policies. He added that there was a sharp division of opinion as to whether the secret of the bomb should be given to any other nation.

When the committee approves the Vandenberg resolution, as members expect it to do, Democratic leader Alben W. Barkley of Kentucky will be on something of a spot. The Military Affairs Committee already has sent to the Senate a resolution that would set up an eleven-member committee, including four from Congress, to control the development and use of atomic energy.

Chairman Elbert D. Thomas, Democrat, of Utah, expects to push this measure. Senator Barkley, a member of Foreign Relations and not of Military Affairs, must decide which of the bills comes up first.

YT 9/23

THE PROBLEM OF DEFENSE

The controversial questions raised by the occupation of Japan and Korea, the problem of what naval bases we are to maintain in the Atlantic and the Pacific, Congressional discussion on demobilization, talk of unification of the armed services, and statements by former Secretary Stimson and Secretary Forrestal on the necessity of maintaining an adequate Army and Navy—all these have focused attention the last few days on the problem of our military establishment, its size and its use as an instrument of national policy. Amid the conflict of opinions from official sources the public can be pardoned if it sees only a hazy picture of the problem and looks in vain to authority for a solution.

After all our earlier wars, the history of the armed services has been a story of starvation budgets and popular neglect. At times the services have been so reduced in strength, in morale and in equipment that the national security has been endangered. At all costs this cyclic trend of wartime glorification and peacetime parsimony should be avoided now.

There is little present evidence that the armed services themselves are planning for the peacetime years with the long view and with comprehensive judgment. Peacetime public support of the services must depend in considerable measure upon the soundness of concept and measure of efficiency with which they operate, and upon the validity of their relationship to the atomic age and to the technical revolution and the sweeping political and economic changes in the world's power system through which we are passing. Thus far there has been only piecemeal defense planning. Instead of unity, there has been division. Interservice frictions are again evident, and each service seems interested primarily in maintaining its own strength and prestige, if necessary at the expense of the other services.

There has been no over-all study of the myriad problems of defense, and it is certain that no service group or committee and no Congressional committee yet organized have the disinterestedness or the time to make an objective, nonpartisan, comprehensive study. The fighting services themselves are necessarily somewhat prejudiced witnesses, and the Congressional committee system makes most of our legislative committees partisan to the services with which they are concerned.

Objectivity and wide and sweeping vision, and an integrated investigation of all phases of our post-war military problems, are needed. Merely to enumerate some of these problems is to give an idea of the complexity and importance of the subject. The post-war system of organization of the services, including the proposed unified Department of the Armed Forces; the system of training, including universal peacetime training; a revised intelligence system; the post-war organization for research; the handling of personnel; military schooling; the integration of our military policy with our foreign policy; the approximate sizes and functions of the various armed forces; the question of bases; industrial mobilization; the types of armament best suited to the atomic age—all these problems cry for adequate attention. Some of them are being studied now, but the studies are disparate and in many instances contradictory and incomplete. In far too many cases the policy of "drift" in our post-war defense needs has become evident.

The atomic bomb and the technological revolution in warfare which it climaxed emphasize more than ever before the necessity for comprehensive study and planning. The best instrumentality for such a study, we believe, is not a committee of the services, or a committee of Congress, or the Joint Chiefs of Staff, but a commission patterned after the well-known Baker and Morrow boards, which were called upon to undertake similar studies in the past.

Such a commission, appointed by the President and Congress, should consist of men carefully selected for breadth of vision and objectivity of approach. It should be entirely civilian in composition, but have military, naval and air advisers. Its membership might include several members of Congress. It should have competent counsel and staff and sufficient appropriations to defray necessary expenses. The scope of its charter should be as broad as the problems that will confront the military in the years to come, and its life should be ample to conduct a thorough basic study into our whole post-war defense problem.

On such a study sound and nonpartisan legislation can be based. By such investigation Army-Navy rivalries, perhaps disastrous to a sound post-war defense, can be avoided.

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Wallace Qualifies Denial

NYT

Special to THE NEW YORK TIMES.

9/24

CHICAGO, Sept. 23—A program aimed at using constructively the tremendous power of the atomic bomb and a system for controlling the bomb as a weapon are being formulated by Government officials and will be presented to the public in the near future, Secretary Wallace predicted today.

The problem of the bomb, he said at a press conference at the University of Chicago, is receiving the attention of all competent Government officials. Since a definite policy has not yet been made, he said, Government officials should not express personal sentiments.

Mr. Wallace denied that he had declared publicly that Russia should get the secret of the atomic bomb. If such a statement is attributed to him, Mr. Wallace said, it is inaccurate. [A published dispatch saying that Mr. Wallace had advocated turning the atomic bomb's secrets to Russia did not assert that he had made the suggestion publicly but said that he had done so at Friday's Cabinet meeting.]

TRUMAN TO SETTLE ATOM BOMB POLICY

NYT 9/24

Says He Alone Must Decide, Hints Split With Cabinet—Denies Wallace Story

Special to THE NEW YORK TIMES.

WASHINGTON, Sept. 23—President Truman said tonight that he would take full responsibility for the future development of the atomic bomb and of atomic energy and denied that Secretary of Commerce Henry A. Wallace had recommended at Friday's Cabinet meeting that the bomb secrets be turned over to the Soviet Union.

At an impromptu news conference held at the rear entrance of the White House when he returned from a holiday at Jefferson Island in Chesapeake Bay, Mr. Truman emphasized that he would make the decision on Administration policy on the bomb and atomic energy when the time came—that he would have to make it.

That decision, he said, will be in the interest of the people of the country and the interest of the nation's foreign and domestic policy.

In connection with his announcement of the assumption of this responsibility, Mr. Truman observed that President Lincoln had issued during the Civil War his Emancipation Proclamation, although his Cabinet had voted against the step.

The President denied firmly that Mr. Wallace had insisted that the atom bomb be turned over to Russia. He said that the Secretary of Commerce took no more active part in the discussion than any one else at the meeting, which the President described as strictly for arriving at a decision with reference to our policy on the bomb.

Mr. Truman did not say directly who introduced the subject at Friday's meeting. He did say that the premise of the atom bomb discussion was outlined by the Secretary of War, but he told reporters that he could not disclose what that premise was.

It was a discussion of what every one thought might be well for the country and the world, the President said, adding that any consideration away from the point of the welfare of this country was incidental.

Mr. Truman declared that he was working with Congressional committees on the problem of the future of the bomb and the development of nuclear energy but added that no final decision had been recommended.

He repeated that he would take the responsibility and make the decision when the time came.

The President returned from Jefferson Island at 7:50 P. M. With him were his press secretary, Charles G. Ross; Matthew J. Connelly, his appointment secretary; Postmaster General Robert E. Hannegan; Sam O'Neal, publicity director of the Democratic National Committee; John W. Snyder, Director of Reconversion; George E. Allen, adviser on liquidation of war agencies, and others.

World Must Use Atom Blackout To Cement Peace, Cripps Warns

NYT 9/24

Briton Holds Secrecy Allows Few Years of Grace—Missile Called Damocles Sword to Spur Us to Ultimate Decision

By Wireless to THE NEW YORK TIMES.

LONDON, Sept. 23—Without specifically joining the debate over sharing the secrets of the atomic bomb, Sir Stafford Cripps, President of the Board of Trade in the British Government, declared tonight that "it is quite idle to imagine that it can be preserved as a secret or that its manufacture will be so difficult or costly as to prevent any major country from indulging in its use."

"Moreover," he said in a speech at Newcastle, "if, as is most probable, atomic energy is developed for industrial purposes, its use for the destructive purposes of war will be no more difficult than was the adaptation of civil aircraft to military use."

If another war were fought "in ten years' time or thereafter," it is certain that a far more destructive atomic bomb would be available to the contestants and "that means if there is another war our civilization will be destroyed," Sir Stafford said.

"The atomic bomb should hang like the sword of Damocles forever over our heads to drop and strike us until such time as we have satisfied ourselves that we have some effective means to remove its danger while yet harnessing this new and wonderful power to the service of man," he continued.

The atom bomb, Sir Stafford said, has telescoped history and in the few years before all nations have the bombs at their disposal the world must learn "the way by which we can settle world differences without war." Hitherto a world federation or international cooperation has been looked on as a long-term objective, but the atom bomb has made it necessary "to approach the problem as if we had lived through the long preparatory stage and were now confronted with the ultimate solution," he declared.

"We must all get out of our minds any idea that world organization and world cooperation are Utopian ideas which are not practical," Sir Stafford said. "They provide the one practical and possible alternative to world destruction."

The driving power to accomplish the task ahead must come from common men and women all over the world, not only from "a few overworked statesmen," he continued.

"The thing I fear is that as the months and years pass the story of Nagasaki and Hiroshima will fade into the background and that we shall become unconscious of this new power of destruction which will thus cease to have its compelling force upon our political actions."

In The Nation

Truman Cabinet Reflects a National Cleavage

NYT 9/25

By ARTHUR KROCK

WASHINGTON, Sept. 24—When the Cabinet the other day had a long discussion of what to do about the atomic bomb secret a division arose which is visible elsewhere in the United States. The argument of one group was that we should share the formula with certain of our recent allies as a further earnest of our good faith and a further assurance of full cooperation toward building a peaceful world. Soviet Russia being the only recent ally not in the secret which has great power to influence that structure, the opposite contention was that Russia should first offer more cooperation to that end and, until it gives clearer assurances, the formula should be confined.

Wallace Had His Say

The Secretary of Commerce, Henry A. Wallace, had his say in the Cabinet meeting. The President has stated that Mr. Wallace was no more active in the discussion than other members and did not himself introduce the subject. But it is not denied that the Secretary gave his views or that the group which has for its slogan "Let Russia Show Us" came away with no doubts that his position is "Let Us Show Russia"—by sharing, for example, the secret of the atomic bomb. Also it was known before the Cabinet met that this would be the chief topic for discussion, and the views expressed by Mr. Wallace were precisely those which it was reported in advance they would be.

If Mr. Wallace merely weighed the pros and cons of the issue and stated no opinion or no trend toward an opinion, then some of his Cabinet colleagues are very careless reporters, for they are sure he spoke as anticipated. No one has represented him as neutral in the argument or as giving any support to the "Let Russia Show Us" section. The President merely said that Mr. Wallace didn't set the schedule in motion (he didn't have to, because he knew it was coming up) and therefore that he did not "propose" it *(de novo)*. And thus "start" the argument.

The Essential Point

This is precision work with words and welcome for the record, because it is well known that rarely do two persons who hear a discussion agree on exact details, such as the order in which things are said. When the pres is absent, as at Cabinet meetings, it must use its reportorial and editorial training to sift the information volunteered (as in this instance) and retain that which comes from dependable sources. Rarely do such persons differ on the essential point, and that was what happened this time. Nor is the essential point in dispute. Mr. Wallace favors the view that we should share the atomic bomb secret with other nations, notably Russia, as a further manifest of our trust and cooperation in the continuing cause for which we were allies in the war. Some in the Cabinet think the shoe is on the other foot. There is similar division along the same lines outside the Cabinet, as has been revealed in several public utterances.

Balance In Doubt

The national dimensions of this division are not yet apparent, and there is no dependable information on how the Cabinet divided, or will divide when a showing of hands is sought, if it shall be. There is a very articulate chorus in this country that favors whatever Soviet Russia does, or appears to do. Since this chorus is convinced that Moscow wants the atomic bomb secret as a fraternal gift, believes the gift should be made in the interest of fairness and world security, and does not doubt that Russia's future policies are benevolent, it is firmly on this side of the discussion. Whether the size of this group is in proportion to its vocal volume, and how large is its following, cannot now be known. There is a less audible segment which is not convinced that Russia can be depended on to employ the atomic bomb to the same ends the United States, Canada and Great Britain would seek, and while it does not question that Russia may in time discover the formula for itself, thinks the secret should not be shared until a more tangible *bona fide* is in sight. These reassurances are more likely to arrive (in this opinion) by pursuing a waiting policy.

The President Will Decide

The President has said that, after weighing all the factors, he will and must assume the responsibility of recommending to Congress which of these suggested courses should be followed, or proposing another procedure not yet foreshadowed. Referring to the Cabinet discussion, he recalled that Lincoln had accepted that kind of responsibility when he overruled his Cabinet by issuing the Emancipation Proclamation. Since this was an autonomous act by the executive, some of Mr. Truman's hearers got the impression that he plans to fix the atomic bomb policy without reference to Congress. But the White House explained today that the President has made no such plan: that he simply meant he will decide what the executive view is to be, whether or not that conforms to the view of his Cabinet or a majority of that body.

Mr. Truman having edited the record in part for precise accuracy and explained that he will speak for the administration when the moment arrives the national debate on this momentous issue can now proceed in order. Mr Wallace has refused to present his views "publicly" at this time, and the rest of the Cabinet have taken the same position. But their difference is not likely to be resolved in enduring silence by all hands.

9/25

By Eleanor Roosevelt

I have been somewhat disturbed lately to read statements in the public press by members of Congress and military officers which seem to assume that the atomic bomb is a secret that can be kept by this nation, if we so desire. The scientists who worked on the discovery, and who should know more about it than anyone else, insist that it is no secret. No scientific discovery can long remain secret when the fundamental principles involved are so widely known; and in this particular case the fundamental principles of atomic energy and its release were widely known even before the particular developments for this project were undertaken.

It seems to me that this discovery has made imperative an educational undertaking in every country in the world. Every man, woman—everywhere—must grow up knowing that since this discovery of how to use atomic energy for destruction, annihilation faces them unless then learn to live in a peaceful world and to allow the policing of the world to be done by an international security agency.

* * *

The sovereignty which each nation will have to reounce is not too high a price to pay for the continuation of our civilization. Almost every country in the world has the needed raw materials for the manufacture of these bombs, and the little countries can do it as well as the big ones. All that is needed to destroy, is to act first. Are we going to live in constant dread of all our neighbors? Except for the completely happy-go-lucky person, able to wipe out all thought of the future, no one could go to bed at night with any sense of security. Once a weapon is discovered, it will always be used by those who are in desperate straits.

The day we found the secret of the atomic bomb we closed one phase of civilization and entered upon another.

HOUSE BILL SEEKS ATOMIC DEFENSES

Presidential Board Proposed in Republican Plan—Great Cities 'Dangerous Spots'

NYT 9/25

Special to THE NEW YORK TIMES.

WASHINGTON, Sept. 24—A bill to create a committee of scientists, industrialists and others to study and recommend defenses against the atomic bomb was introduced in the House today by Representative Leslie C. Arends of Illinois, the Republican whip.

Mr. Arends projected such defense steps as the decentralization of industries and urban populations and the providing of shelters in abandoned mine shafts.

Noting that other nations might attain or receive from the United States the secrets of the atomic weapon, Mr. Arends urged his colleagues to set aside all habits of mind and deal with radical and imaginative thought.

The atomic bomb, he said, had made Washington, New York, Chicago, Detroit and other American centers of population "the most dangerous spots on the face of the earth." The destructive powers of the bomb were known only to a minor degree, he said.

Latest Bombs More Powerful

"I am advised on the most competent authority," Mr. Arends told the House, "that our scientists and technicians have now created atomic bombs of such prodigious and multiplied destructive power that the explosion which killed 150,000 humans and obliterated the city of Hiroshima was only a small fire-cracker by comparison.

The only present answer to the potential threat of the atomic-blast weapon in other hands, Mr. Arends said, is the decentralization of cities, the distribution of productive facilities over the widest possible areas and the provision of underground shelter for both populations and industries.

It might be necessary to commandeer the thousands of miles of abandoned tunnels in the mining regions of Pennsylvania, West Virginia, Ohio, Indiana and other coal-producing centers and the metal mines of Michigan, Colorado, California and other States.

"It may be necessary to make plans for the eventual decentralization of all industries, the ultimate evacuation and scattering of huge cities," Mr. Arends added.

The committee proposed in the Arends bill would have fifteen members appointed by the President. It would have an appropriation of up to $500,000 for its planning.

President's Measure Coming Soon

President Truman expects to send to Congress "fairly soon" his recommendations on the future development and control of atomic energy, Charles G. Ross, White House press secretary, said during the day. Mr. Ross explained that the President was "not setting himself as sole arbiter."

"He is taking advice from the Cabinet," Mr. Ross added, "but his is the responsibility of deciding what the recommendations will be."

In other quarters it was asserted that proposals to reveal the secrets of the atomic bomb to Russia had won support at last Friday's meeting of the Cabinet, not only of Secretary of Commerce Henry A. Wallace but of Abe Fortas, Under-Secretary of the Interior, who represented Secretary Harold L. Ickes at the meeting. Former Secretary of War Henry L. Stimson was represented as having proposed that the secrets be entrusted to some world organization for future control at some future date.

International control of atomic energy, "to forestall an era of international chaos," was urged in the Senate by Senator Sheridan Downey, Democrat, of California.

HT

Bombs Are Not All

9/21

Dr. Reuben G. Gustavson, vice-president of the University of Chicago and a distinguished chemist, makes the point that permanently to suppress the secret of the atomic bomb would mean the "sterilization" of research in the whole enticing field of nuclear physics. The attempt would be almost certainly futile for that reason alone; for the United States could never close avenues of investigation holding out so great a promise to mankind, and would never wish to be placed in so reactionary a position as the attempt would imply. When the science of nuclear physics was "blacked out" under the present security veils it was already holding out many gifts more valuable than that of a super-terrible bomb, or even than the possibility—still rather remote—of the commercial application of atomic power. They cannot be denied to the world.

Its greatest and most exciting potential gift was a gift of knowledge, of a much subtler and surer understanding of the nature of matter and energy and the basic structure of our universe. One may guess the practical uses to which any given invention, such as the bomb, may lead, but there are no limits to the practical uses which may ultimately flow from improved knowledge and understanding. Some thresholds were already opening in fields having nothing to do with military or industrial power. One major use for the discovery of artificial radio-activity was in "tracer" work, in chemistry, biology and medicine. It is now possible to "label" atoms of many substances by preparing radio-active isotopes of those substances and then sending these labeled atoms on their way through chemical reactions and biological processes not previously well understood. The labeled atoms, emitting their signals as they go, supply vital information.

Out of such work have already come some subtly ingenious new modes of attack upon cancer—"almost forgotten," according to Dr. Gustavson, since absorption of all energies upon the atomic bomb work—and other diseases. New light has been thrown upon problems of plant biology and soil chemistry. And this study of the mechanics of organic compounds approaches from one side, while the physicist proper approaches from the other with his studies of mass and energy relations, at least nearer to the profound mysteries of life itself. The United States can no more block advance on these lines than medieval theology could block the advances flowing from the concept of a heliocentric solar system. We have a little time in which to use the influence of our weapon to secure a more rational, less destructive, application of the new physics. But we have not much time.

Institute Will Apply Atomic Radiation In Study of Cancer Causes and Old Age

9/22

Special to THE NEW YORK TIMES.

CHICAGO, Sept. 21—An institute to apply the discoveries of atomic research to such problems as cancer, heredity and growing old has been established at the University of Chicago, Chancellor Robert M. Hutchins said today.

Prof. Raymond E. Zirkle of Springfield, Ill., a botanist who has specialized in the effect of radiations on living organisms, will head the new department—the Institute of Radiobiology and Biophysics.

Members of the new institute will work in cooperation with the Institute of Nuclear Studies. This arrangement is part of the university's plan to further fundamental research in fields which were kept secret or neglected during the war, Chancellor Hutchins said.

Dr. Reubon Gustavson, eminent biochemist and vice president of the university, said:

"The studies in nuclear physics have revealed many types of radiation, some of which can be produced by new methods which allow accurate control.

"These new tools are keys with which to open the secrets of our physical and biological worlds. These tools are dangerous to work with, and man has to learn how to protect himself while using them.

"The application of these radiations to living tissues, organisms and biological systems is in its infancy. We can make new attacks on disease. For example, science now knows some two hundred chemical compounds which cause cancer.

"By replacing the normal atoms in these compounds with radioactive atoms of the same elements, these compounds can be followed in the animal body by a tracer method, and the methods by which they produced cancer may possibly be discovered."

The action of drugs also can be followed by this method, Dr. Gustavson said. Common elements made radioactive by new methods can be incorporated into hormones, vitamins and foods also, he added.

Such problems as just how sugars and fats are burned within the body may be solved for the first time by this "tracer" method, he said.

Using these methods to probe deeper into the structure and activities of the living cell, scientists may also throw new light on heredity in plants and animals and the processes by which living organisms grow old, Dr. Gustavson said.

Topics of The Times

9/19

Universe Worries Smith

In one of his favorite newspapers Ethelbert Smith encountered the other day a short editorial article about the atomic bomb which made him sit up. The article in question pointed out that the atomic bomb obviously has something vital to say about the make-up of the universe, about matter, energy, time and space. But how many citizens, even among those who consider themselves well informed, have anything like a clear notion of just what is the connection between the atomic bomb and these fundamentals of nature? It was a matter for regret.

That reminder hit Ethelbert Smith's conscience like a slow neutron hitting the outer surface of a uranium 238 atom. It sent off in all directions waves of regret not unmixed with gnawing sensations of shame. He asked himself how well informed was he, Ethelbert Smith, about the fundamentals of nature as headlined by the bomb? What did he know about matter, energy, time and space? He said to himself, "Practically nothing." He thought a moment and struck out "practically."

Easy for Jeans

Not that he had not tried. He had made an earnest attempt when people first began talking about nuclear physics, which was, of course, long before the atomic bomb fell. But apparently he did not try hard enough. He remembered letting himself be discouraged by isotopes. Now the isotope of a chemical substance is the very same thing as that chemical substance, only it is different. Could anything be simpler? Yet it stumped our friend Smith. He remembered reading about rays. They are at the same time waves which went through a pinhole in a piece of paper and particles that climbed over the edge. Could anything be more reasonable? It was a state of things which Eddington and Jeans and Compton and Langmuir and Shapley understood like a shot, but it had Ethelbert Smith stymied.

Unfinished Cosmic Business

Yet the decisive factor was something else. Ethelbert Smith might have persisted. He might have sat up later of nights than he did trying to master the secret of the atom if not for a sudden chill thought. It descended on him and took the heart out of him. Even while he was trying to understand the nuclear atom of approximately the year 1940 he would recall that he had never really got around to understanding Relativity as of approximately the year 1925.

At that time, too, he had tried hard, and failed. Again and again he had made that celebrated trip made by millions of his contemporaries as passenger in an elevator falling downward with the speed of gravity and holding an apple in his hand. When that apple was released it did not fall to the bottom of the elevator but retained its position in the air.

Apple Hangs Fire

Ethelbert Smith made that trip, in imagination, again and again, but he never really understood. He always retained a vague suspicion that anybody falling downward in an elevator with the acceleration of gravity would find it safer, on the whole, to drop an apple than a soft-boiled egg.

But at bottom, in this Relativity fiasco of Ethelbert Smith's the ultimate cause was as before. He would have probably kept on trying to understand why gravitation failed to pull down apples dropped in a falling elevator, and the Fitzgerald Projection by which a yardstick grows shorter the faster it flies, and the whole problem of time-space—Ethelbert Smith would have persisted if suddenly he had not said to himself one day, "Why should I be trying to understand this Relativity Theory of the year 1915 when I haven't even begun to understand the Quantum Theory which made its debut about the year 1900?"

Quantum Crosses Street

The Quantum Theory teaches that radiation is a discontinuous process. It is not a stream of water but a stream of bullets. And the bullets are all of the same caliber, which is Planck's Quantum of energy or Planck's Constant. Because the quantum stream is discontinuous it follows that a quantum can be in one place and then further on without passing through the intervening space. It wasn't really hard to understand. Eddington thought it a cinch. He said it was like a man walking uptown from Forty-second Street to Forty-fourth Street without crossing Forty-third Street. Could anything be simpler? But it threw Ethelbert Smith for a loss—all the way back to Thirty-ninth Street.

9/23

The Story of the Atom Smashers

ATOMIC ENERGY FOR MILITARY PURPOSES. By Henry De Wolf Smyth. 264 pp. Princeton, N. J.: Princeton University Press. $1.25, paper; $2, cloth.

By WALDEMAR KAEMPFFERT

PROFESSOR SMYTH'S report on the atomic bomb was originally issued in mimeographed form and proved to be a mine of information for newspaper men among whom it was first circulated. Since it is the declared intention of President Truman and of British statesmen to keep the bomb a secret—an impossibility according to physicists who ought to know—it is not likely that much will be added to what Professor Smyth has written. What we have is virtually a textbook on nuclear physics which traces the history of radio-activity, the efforts to break down the atom by bombardment, the organization of the greatest research team in scientific history to develop the bomb, and an account of the manner in which success was achieved in three years instead of the fifty that would have been required had we relied on the haphazard, laissez-faire method which is supposed to be the only way in which great discoveries can be made.

And Its Aftermath.

Professor Smyth has not written a popular book, and he says so in his preface. He has kept in mind "a substantial group of engineers and scientific men who can understand [how an atomic bomb is constructed and how it works] and who can explain the potentialities of atomic bombs to their fellow citizens." Nevertheless, his account of atomic disintegration from 1939 to the present time can be understood by any person who has had a high school or college education in physics and who is willing to read patiently and attentively.

THE story actually begins in 1905, when Einstein in a simple algebraic equation made it plain that mass and energy are equivalent, so that mass is convertible into energy and energy into mass. When radioactivity was discovered late in the last century, physicists were already talking of releasing energy in enormous amounts from such elements as radium. Einstein showed how much energy could be expected. With the aid of his equation, calculations were made which indicated that if one kilogram (2.2 pounds) of matter were converted entirely into energy we would have the equivalent of all the electric power generated in the United States for about two months. "Compare this fantastic figure with the 8.5 kilowatt-hours of heat-energy which may be produced by burning an equal amount of coal," Professor Smyth bids us. We see why physicists began to bombard matter in the hope of breaking it down.

These efforts led to nothing that an engineer would call "practical," but they did lead to the discovery of new particles and to the theory of the solar-system atom which has a nucleus of protons and neutrons and which is surrounded by planetary electrons that leap from orbit without much regard for space and time in unpredictable ways and in the leaping radiate energy. Until 1939 the physicists had only chipped the nucleus of an atom, so to speak. In that year Drs. Hahn and Strassman in Germany fired neutrons at uranium with dramatic success. The uranium atom was split and in the splitting released six billion times more energy than the bombarding neutrons possessed. It was then that an atomic bomb became more than an H. G. Wells dream.

THE physicists, supposed to be austerely indifferent to war and commerce, were quick to realize the military potentialities of what had been done. Hitler was on the march, and it was known that his scientists were trying to develop an atomic bomb. Enrico Fermi, Italy's foremost physicist, who had fled to this country to escape Mussolini's intolerance, called the attention of the Navy to what had been and what might be done. Einstein wrote a letter to President Roosevelt which resulted in the appointment of the Advisory Committee on Uranium. By 1940 contracts had been made with universities and the Standard Oil Development Company. Drs. Harold Urey and George B. Pegram went to Europe to find out what the British were doing, which turned out to be much. In the end we spent two billions in conducting organized and systematic research on a scale unparalleled in history and with results which are not only startling but which mark the beginning of a new era in mankind's march to peace and plenty or to self-destruction.

The international research team struck out boldly on new lines. It decided that out of the commonest form of uranium, designated by its atomic number 238 (which means that uranium is 238 times heavier than hydrogen, lightest of all elements), another form designated by the number 239 could be obtained, and that this 239 could be converted into neptunium and the neptunium into plutonium. The bomb contains a charge of plutonium, which is bombarded by neutrons, whereupon it explodes with the devastating effects noted in Japan. Both neptunium and plutonium are entirely new elements that nature never took the trouble to make.

Professor Smyth in his detailed account of great scientists at work presents many a tale which cannot but thrill the attentive reader. There was the preparation of a uranium pile, which had to be carefully shielded so that the powerful radiations that came from it during bombardment would not affect the health of workers and contaminate the air with radioactive by-products; there was the invention of elaborate devices to remove the bombarded uranium rods in the pile by remote control; there were the researches that had to be conducted to discover from not more than a speck what the chemical properties of plutonium are so that it could be chemically extracted from the bombarded uranium; there was the bold decision to build two enormous plants without first proceeding through the pilot-plant stage. At times the men who had charge of all this experimental work were frightened. They were dealing with tremendous forces with which no one had any experience, and for all they knew they might be blown up at any moment. No one can read Professor Smyth's report without picturing to himself men who took chances with universal energy, the very energy that makes the stars shine and that the sun releases in colossal amounts. Not until other nations have developed their own atomic bombs, not until the one we have is as obsolete as the high-wheel bicycle and the bustle, are we likely to learn in detail what goes on in the uranium plants where plutonium is made and how the bomb is constructed.

THE distinguished physicists who gave us the bomb were not indifferent to the social effects of their work. Without indulging in too much moralizing on their behalf, Professor Smyth "sees no immediate prospect of running cars with nuclear power or lighting houses with radio-active lamps, although there is a good probability that nuclear power for special purposes can be developed within ten years and that plentiful supplies of radioactive material can have a profound effect on scientific research, and perhaps on the treatment of certain diseases in a similar period." More disturbing is his warning that "should a scheme be devised for converting to energy even as much as a few percent of the matter of some common material, civilization would have the means to commit suicide at will." Whatever it has done, the bomb has awakened the world to this dreadful possibility. It now remains to be seen whether the great industrial nations will prepare themselves for another still more frightful war or whether they will seriously consider the maintenance of peace as a task just as urgent as the launching of armies against one another or against some unscrupulous and reckless dictator of the Napoleon-Hitler-Mussolini type.

THE NEW YORK TIMES

Cabinet Reported Split On Atom Bomb Control

9/26 PM

One Faction Wants United Nations to Share Its Secret

By Thomas F. Reynolds

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WASHINGTON, Sept. 26.—The question of putting the deadly secrets of atomic energy in custody of the United Nations Organization has split President Truman's Cabinet into two sharply divided camps, it has been learned.

This split in the Cabinet, it was believed, is the principal factor which has delayed Truman's presentation of recommendations on the atomic secrets to Congress. The White House, however, still says that a Presidential message may be expected "fairly soon."

Eventually to UNO

It was reported that Truman now is tending toward a plan whereby this country would indicate its willingness to make UNO ultimate custodian of the weapon which leveled Nagasaki and Hiroshima, but will leave to the future determination of just when and how the secret should be turned over. Meanwhile, the President would ask statutory creation of an atomic commission to handle future developments in atomic energy in this country.

(Scientists who worked on development of the atomic bomb have presented formal statements to the Government declaring that they believe other countries can "produce such bombs within a few years without any detailed technical information from us," and have urged speedy steps toward a world authority to control nuclear energy, the *Herald Tribune* reported this morning.

(The *Tribune* says the group expressing this view is the Assn. of Oak Ridge Scientists, which declares it comprises 96 per cent of the civilian scientists connected with the Oak Ridge, Tenn., project. Names of members are being withheld.

("The only remaining 'secrets'," the scientists said, "are technical and engineering details of processes, plants, and devices.")

Russia's the Rub

The struggle inside the Cabinet revolves around the fact that Russia, which of the Big Three alone has failed to find the secret of atomic bombs, would gain access to the secret if it were turned over to UNO. The Soviet is a member of the executive organ of UNO, the World Security Council, which would have ultimate control of the bomb's use in such a case.

There have been some efforts here by circles unfriendly to the liberalism of Secretary of Commerce Wallace to attempt to identify him as the principal Cabinet protagonist of turning the bomb over to Russia. This has been denied by Truman and, on the basis of new information, it now appears that the prime mover in the effort to make UNO the atomic custodian was Henry L. Stimson at the final Cabinet meeting in which he participated as Secretary of War.

Stimson, it was understood, submitted in writing a memorandum which proposed that the most deadly of all weapons be handed to UNO along lines somewhat similar to those proposed several weeks ago by Edward R. Stettinius, Jr., U. S. representative for UNO. The Stimson memorandum precipitated instantaneous Cabinet reaction, with Wallace and acting Secretary of Interior Abe Fortas backing up the Stimson proposal.

Checks Statement

This version checks with the President's statement Sunday night that Wallace was only one voice in the Cabinet discussion and had not advanced the original proposals.

Secretary of Navy Forrestal and Secretary of War Patterson, backed by the full line of generals and admirals, opposed the proposal and made their position clear during the Cabinet discussion, it was understood.

The Stimson-Fortas-Wallace argument reportedly was that it is stupid to attempt to conceal atomic secrets which other nations are certain shortly to discover for themselves. Their point was that the only hope of nations for security against atomic weapons is to put them in custody of a world organization of collective security as a token of good faith and as a means of dissipating distrust among the great powers.

The Forrestal argument was that if any gesture of good faith is to be made, it should be made by Russia toward the U. S. A. Meanwhile, he argued, the U. S. A., Britain and Canada should retain the atomic secret.

Stone Declines

It was also revealed that Harlan F. Stone, Chief Justice of the U. S. A., has turned down a suggestion by Sen. Vandenberg (R., Mich.) that he serve as chairman of a U. S. commission controlling study and development of atomic energy.

"Having some knowledge of the nature of the problem which the proposed commission would be called upon to study, I am satisfied that I could not adequately discharge the duties of my office and at the same time give appropriate attention to the work of the Commission," Stone said in a letter to Vandenberg.

In an address delivered over a nationwide radio network last night, Sen. McMahon (D., Conn.), supported the reasoning of the Stimson-Fortas-Wallace group, arguing in favor of a bill he has introduced which provides for turning over the atomic secrets to the World Security Council "in return for every member of the United Nations making available to us and to the other members of the Security Council all information and know-how that they might have on armaments and weapons of war."

Policy Need Is Urgent

Delays in Program for Atomic Bomb and Post-War Military Problems Criticized

NYT 9/26

By HANSON W. BALDWIN

Special to The New York Times.

WASHINGTON, Sept. 25—The continued delay in adopting a governmental program—national and international—for the control and exploitation of atomic energy and in undertaking the solution of some of our most pressing post-war military problems is the cause of increasing concern in some quarters.

The lack of a publicly enunciated antomic-bomb program has been emphasized this past week by the impasse reached in the Foreign Ministers' conference in London. Any examination of this conference against the background of the experiences of San Francisco and the events that have occurred in Europe and the Orient in the past year shows quite clearly that the process of dividing the world into two blocs, each suspicious of and perhaps competing with the other, has been well started and has not yet been halted. If this process continues, the world faces a melancholy prospect of strife and war. Clear, bold thinking and quick action—to strengthen the international security organization, to limit armaments and to outlaw or control the atomic bomb—are not only desirable but imperative.

Only slightly less imperative—and in fact corollary to international action—is the need to solve some of our pressing national-defense problems. Today the Army is demobilizing many disgruntled young men who will leave the service—as well as many in the Navy—embittered and antagonistic to the military. In some sense, this is the inevitable aftermath of every war, but in a greater measure some of this bitterness might have been averted by a more intelligent officer-enlisted man relationship.

The personal bitterness of many of these men will die in time, but it will color the thinking of some for years and will be particularly strong in this post-war period. It may—and probably will—influence many of our policies; almost certainly it will affect the recruiting campaign for volunteers. It is essential to world peace and to the future security of the United States that armed forces of adequate size be retained, particularly during the interim years now at hand.

It is too late to erase some of the bitterness needlessly caused, but the confidence of many of these veterans in the armed services can be somewhat restored if they can be assured that a new deal will be given to the soldiers of tomorrow. Increased enlistment benefits, as already provided by Congress, do not go far enough; foreign-service pay, for instance—or at least Army of occupation pay—ought to be half again as much as service pay for those on duty in this country.

But this is a detail: the major reform—if we are to obtain and maintain efficient post-war military establishments, particularly in the trying times now at hand—is the reformation of the services' personnel policies and of the officer-enlisted man relationship. An investigation of this problem—as well as of all other post-war military problems—by a commission of the nation's leading citizens could not help providing some of the confidence in a just and workable solution that veterans of this war will not feel if the solution is left to the armed services alone.

* * *

Press reports have mistakenly indicated that there has been agreement by the various supreme commanders of the armed services on the necessity of a single and merged "department of the armed services." There has never been such agreement; all agreed that unified command was essential, but Admiral Chester W. Nimitz, for instance, never endorsed the single department of defense idea. Gen. Douglas MacArthur, now reportedly for the unification, was firmly opposed to it when he was Chief of Staff. The subcommittee of the Joint Chiefs of Staff that investigated the plan was split in its report: one Navy and two Army members were for unification; one Navy member was opposed.

The scheme of unification is attractive in theory and in principle and something like it may be desirable, but a closer examination of the proposal reveals fewer economies and more disadvantages than are discernible at first glance, and it is noteworthy that no major nation has ever combined the departments of Army and Navy into a single whole for any protracted period. What is essential is not so much organizational unification as mental and emotional unification, and that can be attained only by proper education and environment. Some, but as yet not enough, steps in that direction are being taken, including a plan for combined amphibious training in which the Annapolis midshipmen and the West Point cadets will jointly participate.

Military thought supports the continuation of the Joint Chiefs of Staff in some—but not necessarily in its past wartime—form. The public impression of the work of the joint chiefs has not been colored, as yet, by the historical record that will show that the war was too much run "by committee and by compromise," and that ideally a stronger vehicle than the joint chiefs provided in this war is needed.

Atomic Bomb's Scientists Urge A World Authority to Control It

Assert Others Can Produce It in a Few Years; Vannevar Bush Reported to Have Told Cabinet Friday It Would Take Russia 5 to 10 Years

NY Her. Tr. 9/26

By Peter Kihss

Scientists who developed the atomic bomb believe other countries can "produce such bombs within a few years without any detailed technical information from us," and have drawn up formal statements expressing this conviction and urging the United States to take steps at once toward a world authority to control nuclear power.

Their views became known in New York yesterday, as it was reported from Washington that the Cabinet on Friday heard a report by Dr. Vannevar Bush, director of the Office of Scientific Research and Development, that Russia could develop its own atom bomb within five to ten years even if the United States and Great Britain refused to make the secret available.

Dr. Bush was said to have made no recommendation, but to have informed President Truman he believed "scientific views" would favor the free international exchange of all scientific knowledge, including the bomb, among at least major Allied powers.

Opinion of the scientific personnel who worked on the project itself is being channeled through the newly formed Association of Oak Ridge Scientists at Clinton Laboratories, a copy of whose views became available in New York. The group says it comprises 96 per cent of the civilian physicists, chemists, engineers and biologists at the main research and development laboratory of the Oak Ridge, Tenn., atomic bomb project, all with one to three years' experience in development of the bomb and its production plants.

While names of members were withheld for the time being, the association reported its views shared at all levels from rank-and-file group teams up through section chiefs and division heads. With like groups formed during the last three weeks also at the Chicago and Los Alamos, N. M., project laboratories, the association held its views represented those of "hundreds" of scientists who had worked on the research task.

Moved by what they call the bomb's catastrophic possibilities, the scientists plan a program to emphasize their conviction that enduring monopoly of the atomic bomb by the United States is impossible, and that an international authority must be set up, with due safeguards to prevent exploitation by any one nation.

They propose to appear before Congressional committees and sponsor newspaper releases. One hundred and fifty Oak Ridge scientists have already signed a letter to Senator Arthur H. Vandenberg, of Michigan, indorsing his resolution for a joint Congressional committee to study control of the bomb. Inside the project their views have been presented informally thus far to at least one member of the supervisory scientific panel, consisting of Arthur H. Compton, J. Robert Oppenheimer, Enrico Fermi and Ernest O. Lawrence.

Report to People

In statements of deepest urgency which have been approved at various meetings, the scientific personnel, the association said, agreed on their "responsibility to point out to the American people certain facts about this weapon which may help the people to see clearly its military and political implications.

"We know that the President and Congress are immensely concerned with the problem this country faces and that they are determined to establish a policy which will make this weapon a means for insuring a durable peace; but without a clear conviction as to the proper course in the heart of every man everywhere, their efforts can be in vain.

"We can claim no enduring monopoly in the possession of the atomic bomb. Other scientists can apply the fundamental principles, perhaps more successfully than we have done. Other nations, anxious for their own security, will endeavor to develop such weapons.

"In our own work, one of the main impediments was the fact that large-scale efforts and expenditures had to be decided upon on the basis of purely theoretical predictions; every minor setback was extremely serious and reopened the question of whether the development of the weapon during the war was feasible and whether our large-scale development was really justifiable.

"These questions have now been answered, and other countries know that they can produce such bombs within a few years without any detailed technical information from us."

"The only remaining 'secrets,'" the scientists reported, "are technical and engineering details of processes, plants and devices." They noted that the War Department report by Professor Henry D. Smyth, of Princeton, had recounted that "several different processes have been successfully employed."

No specific defense against the bomb exists now, the scientists went on, the only immediate defensive measures being "retaliation, counter-offensive or 'preventive' warfare." Thus, if international relations remain as at present, they argued, "fear of being subjected to atomic bomb attacks may, in fact, enhance the possibility that a nation will itself use them as a preventive measure."

Any attempt by the United States to retain supremacy in atomic warfare would be unsuccessful, the scientists held. First, the withholding of detailed information from a majority of our own scientists would "artificially channel and sterilize the further development of nuclear physics and chemistry in our own country." World-wide distribution of uranium ores would preclude monopolizing of basic resources.

"Once a nation possesses a certain minimum number of bombs," the scientists added, "there is no great advantage in having more."

Raise Sovereignty Issue

The scientists argued that a single, world control of atomic energy was an inescapable conclusion, although they emphasized they were not international statesmen and, for the present at least, not backers of any specific mechanism. This, they frankly conceded, would involve "the loss of a large degree of its sovereignty by each nation, including our own."

One suggestion discussed among assoication members read: "A World Security Council must be made the only custodian of nuclear power in the world. The prestige of the United States at this time will make it possible for us to insist on the adoption of all necessary safety measures; in a few years this bargaining power will have vanished, for many nations will have atomic bombs.

"An International Technical Panel responsible directly to the World Security Council should be set up. Its first duty should be the investigation of all sources of critical materials; immediate and complete control of such sources by the council should then be established.

For Open Inspection

"Provision should be made for further thorough geological surveys and the extension of control to new areas; no nation, whether or not it is a member of the United Nations, may be permitted to interfere with this program.

"Second, all nations must agree to complete and intimate periodic inspections of all scientific, technical, industrial and military establishments by the panel, which is to make public all findings. The inspections must be universal to be effective; international inspectors must be backed by the full might of the Council.

"Third, all relevant scientific and technological advances, regardless of publication elsewhere, must be reported directly and immediately to the Technical Panel of the Council, which is to be charged with responsibility of universal dissemination of all such information; all scientists should and will be honor-bound to the implementation of such regulations.

"It is only after the adoption of such a policy as this that we of the United States can feel a reasonable assurance that this nuclear bomb will not be used for our own destruction."

Bush Declines Comment

Dr. Bush declined to discuss the atomic bomb problem yesterday, on the ground it would be "improper" for him to talk, since he is a member of the interim commission named by the President to control the bomb.

But the New York Herald Tribune Washington bureau learned from several Cabinet members that he had suggested that Russia could unlock the secret in a decade, although it would have to reduce its standard of living or receive substantial financial aid from the other Allies during its research era.

Overwhelming Cabinet sentiment was reported to have favored Anglo-American retention of the secret, with no view stated by President Truman. The only other suggestion came from Secretary of War Stimson, who reportedly proposed that the bomb be placed under trusteeship of the United Nations Organization's security council, and from Secretary of Commerce Henry A. Wallace. Mr. Wallace was understood to have suggested but not to have pressed the point, that it might prove worthwhile in the long run to turn the secret over to Russia to cement Soviet friendship.

Stone Declines Job

During the day Senator Vandenberg revealed that Chief Justice Harlan F. Stone had written him in reply to an inquiring letter, saying his work on the Supreme Court bench would not permit him to serve as chairman of a proposed committee to be appointed by Congress on the control problem.

Senator Brien McMahon, Democrat, of Connecticut, proposed in a Columbia Broadcasting System talk that the secret be turned over to the United Nations Security Council, provided all other nations make available their research on war weapons as well. Reporting all scientists with whom he had talked had agreed it would be impossible to keep the secret, he charged those favoring a United States effort at secrecy were "the isolationists of yesterday" who distrusted the United Nations Organization.

The American Council on Education submitted a proposal to President Truman urging appointment of a committee to study effects of the atomic bomb on national defense and international relations.

Drama of the Atomic Bomb Found Climax in July 16 Test

Following is the first of a number of articles by a staff member of THE NEW YORK TIMES *who was detached for service with the War Department at its request to explain the atomic bomb to the lay public. He witnessed the first test of the bomb in New Mexico and, on a flight to Nagasaki, its actual use.*

9/26

NYT

By WILLIAM L. LAURENCE

The Atomic Age began at exactly 5:30 Mountain War Time on the morning of July 16, 1945, on a stretch of semi-desert land about fifty airline miles from Alamagordo, N. M., just a few minutes before the dawn of a new day on this earth.

At that great moment in history, ranking with the moment in the long ago when man first put fire to work for him and started on his march to civilization, the vast energy locked within the hearts of the atoms of matter was released for the first time in a burst of flame such as had never before been seen on this planet, illuminating earth and sky for a brief span that seemed eternal with the light of many super-suns.

The elemental flame, first fire ever made on earth that did not have its origin in the sun, came from the explosion of the first atomic bomb. It was a full-dress rehearsal preparatory to use of the bomb over Hiroshima and Nagasaki — and other Japanese military targets had Japan refused to accept the Potsdam Declaration for her surrender.

The rehearsal marked the climax in the penultimate act of one of the greatest dramas in our history and the history of civilized man—a drama in which our scientists, with the Army Corps of Engineers as director, were working against time to create an atomic bomb ahead of our German enemy.

The collapse of Germany marked the end of the first act of this drama. The successful completion of our task, in the greatest challenge by man against nature so far, brought down the curtain on the second act.

The grand finale came three weeks afterward over the skies of Japan with a swift descent of the curtain on the greatest war in history.

The atomic flash in New Mexico came as a great affirmation to the prodigious labors of our scientists during the past four years, in which they managed to "know the unknowable and unscrew the inscrutable."

It came as the affirmative answer to the until then unanswered question: "Will it work?"

With the flash came a delayed roll of mighty thunder, heard, just as the flash was seen, for hundreds of miles. The roar echoed and reverberated from the distant hills and the Sierra Oscuro Range near by, sounding as though it came from some supramundane source as well as from the bowels of the earth.

The hills said "yes" and the mountains chimed in "yes." It was as if the earth had spoken and the suddenly iridescent clouds and sky had joined in one mighty affirmative answer. Atomic energy —yes.

It was like the grand finale of a mighty symphony of the elements, fascinating and terrifying, uplifting and crushing, ominous, devastating, full of great promise and great forebodings.

I watched the birth of the Era of Atomic Power from the slope of a hill in the desert land of New Mexico, on the northwestern corner of the Alamogordo Air Base, about 125 miles southwest of Albuquerque. The hill, named Compania Hill for the occasion, was twenty miles to the northwest of Zero, the code name given to the spot chosen for lighting the first atomic fire on this planet. The area embracing Zero and Compania Hill, twenty-four miles long and eighteen miles wide, had the code name Trinity.

Caravan of Scientists by Night

I joined a caravan of three buses, three automobiles and a truck carrying radio equipment at 11 P. M. Sunday, July 15, at Albuquerque. There were about ninety of us in that strange caravan, traveling silently and in utmost secrecy through the night on probably as unusual an adventure as any in our day.

With the exception of your correspondent, the caravan consisted of scientists from the highly secret atomic bomb research and development center in the mesas and canyons of New Mexico, twenty-five miles northwest of Santa Fe, where we solved the secret of translating the fabulous energy of the atom into the mightiest weapon ever made by man. It was from there that the caravan set out at 5:30 that Sunday afternoon for its destination, 212 miles to the south.

These were the "mesa-men" on the march, dwellers in the "caves" in the interior of atoms, pioneer explorers of vast new continents in hitherto forbidden realms of the cosmos, builders of the civilization of tomorrow.

Here on trails hallowed by pioneers of other days, who opened new frontiers and did not rest until they conquered a continent, "covered wagons" were rolling again through the night on their way to open still newer frontiers of a continent that has no limits in space.

The caravan wound its way slowly over the tortuous roads overlooking the precipitous canyons of northern New Mexico, passing through Espagnola, Santa Fe and Bernadillo, arriving at Albuquerque at about 10 P. M. Here it was joined by Sir James Chadwick, who won the Nobel Prize and knighthood for his discovery of the neutron, the key that unlocks the atom; Professor Ernest O. Lawrence of the University of California, master atom-smasher, who won the Nobel Prize for his discovery of the cyclotron; Professor Edwin H. McMillan, also of the University of California, one of the discoverers of plutonium, the new atomic energy element, and several others from the atomic bomb center, who, with your correspondent, had arrived during the afternoon.

The night was dark with black clouds and not a star could be seen. Occasionally a bolt of lightning would rend the sky and reveal for an instant the flat semi-desert landscape, rich with historic lore of past adventure. We, too, were headed for adventure, Argonauts on the way to a Golden Fleece richer by far than Jason ever found. We were on the road to the fabled golden Seven Cities of Cibola, sought in vain by Coronado on trails not too far away from the area we were traversing.

We rolled along on U. S. Highway 85, running between Albuquerque and El Paso, through sleeping ancient Spanish-American towns, their windows dark, their streets deserted—towns with music in their names, Las Lunas, Belen, Bernardo, Alamillo, Socorro, San Antonio.

At San Antonio we turned east and crossed "the bridge on the Rio Grande with the detour in the middle of it." We traveled ten and one-half miles eastward on U. S. Highway 380, where we turned south on a specially built dirt road, running for twenty-five miles to the Base Camp at Trinity.

The end of our trail was reached after we had covered about five and one-fifth miles on the dirt road. Here we saw the first signs of life since we had left Albuquerque about three hours earlier, a line of silent men dressed in helmets. A little further ahead a detachment of military police examined our special credentials.

We descended and looked about us. The night was still pitch black save for an occasional flash of lightning in the eastern sky, outlining for a brief instant the range of Sierra Oscuro directly ahead of us. We were in the middle of the New Mexico desert, miles away from nowhere, not a sign of life, not even a blinking light on the distant horizon. This was to be our caravansary until the zero hour.

From a distance to the southeast the beam of a searchlight probed the clouds. This gave us our first sense of orientation. The bombing test site, Zero, was a little to the left of the searchlight beam, twenty miles away. With the darkness and the waiting in the chill of the desert the tension became almost unendurable.

Directions for Observers' Safety

We gathered around in a circle to listen to directions on what we were to do at the time of the "shot," directions read aloud by the light of a flashlight:

At a short signal of the siren at minus five minutes to zero "all personnel whose duties did not specifically require otherwise" were to prepare "a suitable place to lie down on."

At a long signal of the siren at minus two minutes to zero "all personnel whose duties did not specifically require otherwise" were to "lie prone on the ground immediately, the face and eyes directed toward the ground and with the head away from Zero."

"Do not watch for the flash directly," the directions read, "but turn over after it has occurred and watch the cloud. Stay on the ground until the blast wave has passed (two minutes).

"At two short blasts of the siren, indicating the passing of all hazard from light and blast, all personnel will prepare to leave as soon as possible.

"The hazard from blast is reduced by lying down on the ground in such a manner that flying rocks, glass and other objects do not intervene between the source of blast and the individual. Open all car windows.

"The hazard from light injury to eyes is reduced by shielding the closed eyes with the bended arms and lying face down on the ground. If the first flash is viewed a 'blind spot' may prevent your seeing the rest of the show.

"The hazard from ultraviolet light injuries to the skin is best overcome by wearing long trousers and shirts with long sleeves."

David Dow, assistant to the scientific director of the Atomic Bomb Development Center, handed each of us a flat piece of colored glass used by arc welders to shield their eyes. Dr. Edward Teller of George Washington University cautioned us against sunburn. Someone produced sunburn lotion and passed it around.

It looked eerie seeing a number of our highest ranking scientists seriously rubbing sunburn lotion on their faces and hands in the pitch blackness of the night, twenty miles away from the expected flash. These were the men who, more than anybody, knew the potentialities of atomic energy on the loose. It gave one an inkling of their confidence in their handiwork.

The bomb was set on a structural steel tower 100 feet high. Nine miles away to the southwest was the base camp. This was G. H. Q. for the scientific high command, of which Professor Kenneth T. Bainbridge of Harvard University was field commander.

Here were erected barracks to serve as living quarters for the scientists, a mess hall, a commissary, a Post Exchange and other buildings. Here the vanguard of the atomists, headed by Prof. J. R. Oppenheimer of the University of California, scientific director of the atomic bomb project, lived like soldiers at the front, supervising the enormously complicated details involved in the epoch-making tests.

Here early that Sunday afternoon gathered Maj. Gen. Leslie R. Groves, Commander in Chief of the Atomic Bomb Project; Brig. Gen. T. F. Farrell, hero of World War I, General Groves' deputy; Prof. Enrico Fermi, Nobel Prize winner and one of the leaders in the project; President James Bryant Conant of Harvard; Dr. Vannevar Bush, Director of the Office of Scientific Research and Development; Dean Richard C. Tolman of the California Institute of Technology, Prof. R. F. Bacher of Cornell, Col. Stafford L. Warren, University of Rochester (N. Y.) radiologist, and a host of other leaders in the atomic bomb program.

At the Base Camp was a dry, abandoned reservoir, about 500 feet square, surrounded by a mound of earth about eight feet high. Within this mound bulldozers dug a series of slit trenches, each about three feet deep, seven feet wide and about twenty-five feet long.

At a command over the radio at zero minus one minute all observers at Base Camp, about 150 of the "Who's Who" in science and the armed forces, lay down "prone on the ground" in their pre-assigned trenches, "face and eyes directed toward the ground and with the head away from Zero."

Three other posts had been established, south, north and west of Zero, each at a distance of 10,000 yards (5.7 miles). These were known, respectively, as South-10,000, North-10,000 and West-10,000, or S-10, N-10 and W-10.

Here the shelters were much more elaborate, wooden structures, their walls reinforced by cement, buried under a massive layer of earth.

S-10 was the control center. Here Professor Oppenheimer, as scientific commander in chief, and his field commander, Professor Bainbridge, issued orders and synchronized the activities of the other sites.

Here the signal was given and a complex of mechanisms was set in motion that resulted in the greatest burst of energy ever released by man on earth up till that time.

No switch was pulled, no button pressed, to light this first cosmic fire on this planet.

At forty-five seconds to zero, set for 5:30 o'clock, young Dr. Joseph L. McKibben of the University of California, at a signal from Professor Bainbridge, activated a master robot that set off a series of other robots. Moving "electronic fingers" writ and moved on, until at last strategically spaced electrons moved to the proper place at the proper split second.

The forty-five seconds passed and the moment was zero.

At our observation post on Compania Hill the atmosphere had grown tenser as the zero hour approached. We had spent the first part of our stay partaking of an early morning picnic breakfast that we had taken along with us. It had grown cold in the desert and many of us, lightly clad, shivered. Occasionally a drizzle came down and the intermittent flashes of lightning made us turn apprehensive glances toward Zero.

We had had some disturbing reports that the test might be called off because of the weather. The radio we had brought along for communication with Base Camp kept going out of order, and when we had finally repaired it some blatant band would drown out the news we wanted to hear.

We knew there were two specially equipped B-29 Superfortresses high overhead to make observations and recordings in the upper atmosphere, but we could neither see nor hear them. We kept gazing through the blackness.

Suddenly, at 5:29:50, as we stood huddled around our radio, we heard a voice ringing through the darkness, sounding as though it had come from above the clouds:

"Zero minus ten seconds!"

A green flare flashed out through the clouds, descended slowly, opened, grew dim and vanished into the darkness.

The voice from the clouds boomed out again:

"Zero minus three seconds!"

Another green flare came down. Silence reigned over the desert. We kept moving in small groups in the direction of Zero. From the east came the first faint signs of dawn.

And just at that instant there rose from the bowels of the earth a light not of this world, the light of many suns in one.

It was a sunrise such as the world had never seen, a great green super-sun climbing in a fraction of a second to a height of more than 8,000 feet, rising ever higher until it touched the clouds, lighting up earth and sky all around with a dazzling luminosity.

Up it went, a great ball of fire about a mile in diameter, changing colors as it kept shooting upward, from deep purple to orange, expanding, growing bigger, rising as it was expanding, an elemental force freed from its bonds after being chained for billions of years.

For a fleeting instant the color was unearthly green, such as one sees only in the corona of the sun during a total eclipse.

It was as though the earth had opened and the skies had split. One felt as though he had been privileged to witness the Birth of the World—to be present at the moment of Creation when the Lord said: Let There be Light.

On that moment hung eternity. Time stood still. Space contracted into a pinpoint.

To another observer, Prof. George B. Kistiakowsky of Harvard, the spectacle was "the nearest thing to Doomsday that one could possibly imagine."

"I am sure," he said, "that at the end of the world—in the last milli-second of the earth's existence—the last man will see what we saw!"

A great cloud rose from the ground and followed the trail of the Great Sun.

At first it was a giant column that soon took the shape of a supramundane mushroom. For a fleeting instant it took the form of the Statue of Liberty magnified many times.

Up it went, higher, higher, a giant mountain born in a few seconds instead of millions of years, quivering convulsively.

It touched the multi-colored clouds, pushed its summit through them, kept rising until it reached a height of 41,000 feet, 12,000 feet higher than the earth's highest mountain.

All through this very short but extremely long time-interval not a sound was heard. I could see the silhouettes of human forms motionless in little groups, like desert plants in the dark.

The new-born mountain in the distance, a giant among pigmies against the background of the Sierra Oscuro range, stood leaning at an angle against the clouds, a vibrant volcano spouting fire to the sky.

Roar Reverberations Over Desert

Then out of the great silence came a mighty thunder. For a brief interval the phenomena we had seen as light repeated themselves in terms of sound.

It was the blast from thousands of blockbusters going off simultaneously at one spot.

The thunder reverberated all through the desert, bounced back and forth from the Sierra Oscuros, echo upon echo. The ground trembled under our feet as in an earthquake.

A wave of hot wind was felt by many of us just before the blast and warned us of its coming.

The Big Boom came about 100 seconds after the Great Flash—the first cry of a new-born world. It brought the silent, motionless silhouettes to life, gave them a voice.

A loud cry filled the air. The little groups that hitherto had stood rooted to the earth like desert plants broke into a dance, the rhythm of primitive man dancing at one of his fire festivals at the coming of spring.

They clapped their hands as they leaped from the ground—earthbound man symbolizing a new birth in freedom—the birth of a new force that for the first time gives man means to free himself from the gravitational pull of the earth that holds him down.

The dance of the primitive man lasted but a few seconds, during which an evolutionary period of about 10,000 years had been telescoped. Primitive man was metamorphosed into modern man—shaking hands, slapping each other on the back, laughing like happy children.

The sun was just rising above the horizon as our caravan started on its way back to Albuquerque and Los Alamos. It rose to see a new thing under the sun, a new era in the life of man.

We looked at it through our dark lenses to compare it with what we had seen.

"The sun can't hold a candle to it!" one of us remarked.

LIGHTNING BLEW UP DUMMY ATOM BOMB

NYT 9/27

Scientists at New Mexico Site Warned of Hidden Peril Shortly Before Test

'GADGET' SET-UP COMPLEX

500 Miles of Electrical Wire Used to Note Self-Recording Data About Explosion

Following is the second of a number of articles by a staff member of THE NEW YORK TIMES *who was detached for service with the War Department at its request to explain the atomic bomb to the lay public. He witnessed the first test of the bomb in New Mexico and, on a flight to Nagasaki, its actual use.*

By **WILLIAM L. LAURENCE**

The great cloud of fire and smoke that rose more than eight miles to the stratosphere over the New Mexico desert on the morning of July 16, when the first atomic bomb poured out its energy in an explosive burst greater than any ever produced on earth, symbolized a funeral pyre for the Japanese Empire.

The select few who witnessed the spectacle knew for certain at the instant of the explosion that the new weapon would prove decisive in a relatively short time. No power on earth, everyone realized, could stand up against the elemental force liberated in these bombs.

That cosmic fire that lighted earth and sky for hundreds of miles was a modern version of the Biblical handwriting on the wall to the Japanese and all would-be future aggressors. Mene, Mene, Tekel, Upharsin. He has counted, counted, weighed and they divide. You have been weighed and found wanting.

For the immediate future—and that was what everyone involved in the atomic bomb project was mostly concerned with at the time—that mightiest man-made thunderbolt meant life for many thousands of our fighting men. It meant a quicker end to the war, assurance of a speed-up in the coming of peace to the firesides of America and her Allies.

The weeks preceding the test, when the scientists were putting the final touches on what they used to refer to as the "gadget," witnessed the most dramatic scenes in the history of scientific endeavor. Work went on feverishly day and night. The air was tense with the very energy of the atomic substance being prepared for the crucial test, the tests of tests.

Problems in Decision for Test

The very decision to make the test took many long hours of discussion of all the pros and cons involved. It was finally concluded that only an actual explosion of the atomic bomb under controlled conditions would reveal any possible hidden faults that could not otherwise be corrected were we to drop it untested on the enemy.

The decision opened up a host of serious problems. A site had to be found far away from inhabited localities. Measures had to be taken to prevent the tremendous thunderbolt, which was expected to be seen and heard for hundreds of miles, from giving away our greatest secret.

On the scientific side, the heart and purpose of the test, apparatus and techniques had to be devised to study, from a distance of several miles entirely by automatic controls, phenomena that take place in less than a millionth of a second. These included measurements of what takes place inside the atomic bomb at the time of explosion, the amounts and types of energy released, the effect, intensity and extent of the blast, the post-explosion radiations on the ground and in the air, meteorological observations and a host of other phenomena that took five typewritten pages to enumerate.

The studies were devised to make the bomb tell its story before, during and after the detonation. For this purpose scores of the most delicate measuring, photographing and recording devices, old and new, were placed in concrete pillboxes and underground shelters over a radius of many miles.

These included a number of high speed cameras of all types, numerous electronic devices, supersonic detectors, all sorts of instruments for probing inside the infinitesimal world of the atom's nucleus, devices to measure the intensity of the blast, radiation meters, and a host of other special equipment.

It required about 500 miles of wiring to connect the various electrically operated instruments in the bomb-proof shelters several miles away to the site of the "gadget." Seismographs were also placed at various distances to measure the effects of the atomic explosion underground, and especially equipped B-29 Superfortresses went aloft to study the effects in the upper atmosphere.

Selection, Precautions of Site

More than 300 scientists were involved in the test, including a number of Nobel Prize winners and scores of the world's leading physicists, chemists, radiologists, meteorologists, mathematicians and explosive and ballistics experts. About 250 military personnel were engaged in carrying out the security and protective measures.

A providential warning that came a few days before the test led to hasty last-minute changes designed to prevent a possible catastrophe that had not been foreseen. A dummy bomb, an exact duplicate of the atomic "gadget," had been set up on the tower as a practice model. A thunderstorm came along and touched it off.

This led to protective measures against the possibility that a bolt of lightning might set off the first atomic explosion on earth, possibly at a time when the scientists were still in its vicinity.

The northwestern section of the 2,000 square-mile Alamogordo Air Base was chosen as the test-site because of its isolation, inaccessibility, desirable meteorological characteristics and its remoteness from large towns. Its nearest inhabited locality is the village of Carrizozo, population 1,500, about thirty airline miles due east from the spot selected for the first atomic explosion.

Other communities in the locality are Socorro, population 3,500, about thirty miles to the northwest, and Alamogordo, fifty miles to the southeast. The nearest large city is Albuquerque, about 125 miles to the northwest.

Everything relating to the "gadget," the spot where it stood on its tower, the time scheduled for its blow-off, as well as the "Great God It" of the occasion was referred to as "Zero," the code name for the site.

For everyone concerned Zero became the center of the universe. Time and space began and ended at Zero. All life centered about Zero. Everyone thought only of Zero and the zero hour, or rather the zero-microsecond.

The only living beings that dared venture near the spot where Zero vanished in a great cloud of atomic fire was a crew of scientists in two Sherman tanks, the insides of which were lined with lead. They took samples of the earth by means of special scoops manipulated from the inside and made preliminary observations of the site, which, later observations revealed, was depressed over a radius of 400 yards to a depth ranging from ten feet at the periphery to twenty-five feet in the center.

The transfer of the "gadget" over a distance of more than 200 miles from Los Alamos to Zero presented a major problem, involving both security and safety. The transportation of this precious stuff, possessing a value inestimable in terms of worldly considerations, was in charge of the Military Intelligence branch at Los Alamos, headed by Capt. Thomas O. Jones, formerly a Chicago lawyer.

One of the historic moments came on Tuesday, July 3, when a group of young physicists, who had learned to tame the wildest elemental force in nature, brought the active material to the point they call "criticality," a point at which the atomic substance is brought as close as possible to the exploding stage.

This was no mere game tempting fate. It had to be done to check theory with practice.

Several units of the complicated assembly left Los Alamos Thursday morning, July 12, in a convoy accompanied by armed guards and several scientists, arriving at its destination that same afternoon. Another convoy left Los Alamos at 12:01 Friday morning, July 13, arriving at Zero nine hours later.

Professor R. F. Bacher of Cornell and Professor George B. Kistiakowsky of Harvard were in charge of the assembly of the principal units of the "gadget." The assembly of the entire unit was completed on Saturday, July 14. Tests by the score were carried out to make certain that every part functioned properly.

A week earlier a group of leading radiologists under the direction of Colonel Stafford L. Warren, of the University of Rochester (N. Y.), began setting up a network of radiological stations at various distances to measure the radiation effects of the explosion.

The flash lighted up the sky at Albuquerque and was seen as far as Amarillo, Tex., 450 miles east of Zero. At El Paso 150 miles to the south, persons saw the flash and heard the blast and two successive echoes. Residents of Silver City, N. M., 200 miles to the southwest, and at Gallup, N. M., 235 miles to the northwest, reported that their windows rattled, those at Gallup stating that they also heard two explosions.

Various reports from a number of other localities listed the explosion as an earthquake, a meteor, or an airplane crash. Members of the crew and passengers aboard a Santa Fe Railroad train near Mountainair, about seventy miles to the northeast, thought they saw a bomber explode and burn in the sky.

A subsequent examination of the ground revealed that all life, vegetable as well as animal, was destroyed within a radius of about a mile. There was not a rattlesnake left in the region, nor a blade of grass. The sand within a radius of 400 yards was transformed into a glass-like substance the color of green jade. A steel rigging tower weighing thirty-two tons, at a distance of 800 yards, was turned into a twisted mass of wreckage.

A herd of antelope that had been grazing several miles away vanished completely. Up to the present the antelope have not returned.

To Prof. J. R. Oppenheimer of the University of California, who directed the work on the bomb, the effect, he told me, was "terrifying" and "not entirely undepressing." After a pause, he added:

"Lots of boys not grown up yet will owe their life to it!"

BOMB STUDIES TASK DECLINED BY STONE

Chief Justice Unable to Give Time—Educators Request President to Pick Board

9/26

Special to THE NEW YORK TIMES.

WASHINGTON, Sept. 25—Harlan F. Stone, Chief Justice of the United States, has declined a suggestion from Senator Arthur H. Vandenberg, Republican, of Michigan, that he accept chairmanship of a commission to study development and control of atomic energy, Mr. Vandenberg disclosed today.

Simultaneously, the White House released a letter from eight leading educators asking President Truman that he name such a commission that would be especially concerned with the aspects of national defense and international relations.

The Chief Justice said in a letter to Mr. Vandenberg, in reply to the Senator's request that he consider such an appointment, that he felt his duties on the Supreme Court would make it impossible for him to do an adequate job on such a group.

"I am not unmindful of the grave importance of such an undertaking," Chief Justice Stone wrote, "and I would be deeply interested in rendering such a service if I were free to undertake it. But the duties of a justice of the Supreme Court are difficult and exacting. As I am committed to the former, it is clear to me that I could not undertake the latter."

The letter to the President from the educators was signed by O. C. Charmichael, chancellor of Vanderbilt University; Harry W. Chase, chancellor of New York University; James B. Conant, president of Harvard; Carter Davidson, president of Knox College; Edward Stanford, O. S. A., rector of Augustinian College; Raymond S. Walters, president of the University of Cincinnati; Herman B. Wells, president of the University of Indiana, and George F. Zook, ex-officio president of the American Council on Education.

"The development of the atomic bomb," the letter said, "has introduced an entirely new element into all considerations of national defense and international relations and has made obsolete much of our previous thinking.

"Furthermore, the current confusion in the public mind makes imperative a new and objective study of the whole situation. In particular, it seems clear that the issue of universal military training ing cannot be considered apart from other measures for national defense.

"We, therefore, urge you as President to appoint a commission composed of leading citizens of the nation who shall be empowered to make such a study, including calling upon military and scientific experts, representatives of appropriate governmental agencies and others for assistance, and to present its recommendations to you.

"In no other way, we believe, can the public be assured that all necessary and proper steps are being taken to make secure the future position of the United States."

SENATE BACKS ATOM BODY

Sends to House Resolution for Group to Study Basic Energy

NYT 9/28

WASHINGTON, Sept. 27 (AP)—The Senate unanimously approved and sent to the House today a resolution to set up a joint committee to study the development, control and use of atomic energy.

Without debate, Senators adopted a resolution by Senator Arthur Vandenberg, Republican of Michigan, establishing a twelve-member committee to which all legislation dealing with nuclear energy or the atomic bomb would be channeled. Six members of the Senate and six Representatives would be appointed by Senator McKeller, Democrat of Tennessee, the Senate's presiding officer, and by Speaker Sam Rayburn.

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55 IN CONGRESS ASK U. S. TO KEEP BOMB

Answering Question, They Say We Should Not Give Secret to the Soviet Union

NYT 9/28

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WASHINGTON, Sept. 27—Almost unanimous Congressional opposition to the disclosure of the atomic bomb secret to any nation not now holding it was tempered in answers received today to a survey of opinion by a strong minority view that the United Nations Organization should control and/or administer the bomb to enforce the peace.

Urging this solution, Senator Carl Hatch, Democrat, of New Mexico, pointed out that we could not hope to keep the bomb's secret to ourselves forever. Senator Elmer Thomas, Democrat, of Oklahoma, pointed out that the secret should be kept as long as possible if only because a war in which such bombs were used on both sides would be catastrophic.

Sixty-one answers have so far been received from Senators and Representatives to a telegram calling for "your views whether atomic bomb secret should be given Russia and why."

55 Would Keep Secret

Of this number, fifty-five, thirty-six Republicans and nineteen Democrats, opposed revelation of the secret to any country, most of them mentioning Russia specifically. No specific opposition was mentioned by three Democrats. Twenty-three qualified their opposition and three did not say no but urged some United Nations control.

Qualified opposition to giving away the secret of the atomic bomb was expressed by Senator Arthur Capper, Republican, of Kansas in these words: "I would want to know with more certainty than I feel now what uses Russia would make of the atomic bomb before turning over this valuable military secret. If in return the United States can get some dependable assurance that Russia's foreign policy will not conflict with our own, the proposition can be considered."

Senator Allen J. Ellender, Democrat, of Louisiana, said: "We shouldn't divulge the mechanism of secret weapons to Russia or any country. * * * I fear that if we should divulge the secret, it may become common property and fall into the hands of unscrupulous leaders who might use it against us."

Representative Dean M. Gillespie, Republican, of Colorado, said: "I am in favor of keeping the atomic bomb secret from the rest of the world as long as possible. * * * I believe that if any other nation in the world had that secret exclusively, they would not share it with us."

Doubts Russia Is Peaceful

Representative Fred Bradley, Republican, of Michigan, declared: "I am unalterably opposed to giving the atomic-bomb secret to Russia. I believe the secret of the atomic bomb should remain in the hands of genuine peace-loving democracies, in which family Russia has not in the past nor by present policies established her right to be included."

Senator Joseph F. Guffey, Democrat, of Pennsylvania; Representative Brooks Hays, Democrat, of Arkansas, and Representative Ellsworth B. Buck, Republican, of New York, urged, in the words of Representative Hays: "America should not give the atomic-bomb secret to Russia or to any other national or international body at this time; but, since it will ultimately be discovered by others, we should begin, under Congressional authority, studies to determine the wisest use of our present advantage."

Representative Oren Harris, Democrat, of Arkansas, said that he felt that not even the United Nations Organization should have authority over the secret "until and unless adequate provisions are made for its control."

Favoring use of the atomic-bomb secret, for which America paid $2,000,000,000, as an international bargaining factor was Representative James I. Dolliver, Republican, of Iowa, who said: "I cannot see why revealing the atomic-bomb secret would improve our relations with Russia. Rather, it seems, our knowledge of atomic power might be excellent trading stock in our foreign dealings to keep the peace. Is there any immediate urgency for such a revelation by us? What does the United States get in return?"

Representative Harold Knutson, Republican, of Minnesota, said: "Reports indicate the stalemate of the London meeting of the Big Five Foreign Ministers is due to unreasonable demands by Russia. None can foretell its outcome or consequences. We had better keep the atomic-bomb secrets locked up in a burglar-proof vault until the situation over there is clarified."

Many Congressmen felt that the secret was no longer that of the United States and Britain alone.

The view that America must retain the atomic bomb, together with other war-developed weapons, to "enforce peace by force," was held by Representative A. L. Miller, Republican, of Nebraska, who added that "Russia seems to be non-cooperative in peace efforts and the Allies are not welcome in Russian territory."

Representative Edward O. McCowen, Republican, of Ohio, declared: "The atomic-bomb secret should be kept. A friendly country today may be an enemy tomorrow."

Representative Frank W. Boykin, Democrat, of Alabama, said: "I am opposed to giving the atomic-bomb secret to Russia or anybody else. I think we have given everybody too much already."

Representative John M. Vorys, Republican, of Ohio, asserted: "The atomic secret should not be given Russia. * * * based on violation of recent pledges, before we can go further in appeasing Russian suspicion of us."

Senator Elmer Thomas, Democrat, of Oklahoma, said: "I am opposed to divulging the atomic bomb secret to any nation or to any person. * * * If Russia, Great Britain and the United States cannot get along together, then another war is inevitable, and if such a war comes, some nation will triumph and the balance of the world will be reduced to slavery and poverty."

Declining any specific negative answer were Representatives William J. Gallagher, Democrat, of Minnesota, and Samuel Dickstein, Democrat, of New York. Representative Dickstein said: "I believe the future of the atomic bomb is a serious problem. I suggest further and very careful consideration be given the matter."

HOOVER BIDS U. S. KEEP ATOM SECRET

NYT 9/28

Urges Time to Devise Control—Asks International Accord on Bomb, Uranium Ores

The United States and Great Britain should keep the secret of the atomic bomb, if for no other reason than to give time to devise methods for its control, former President Herbert Hoover declared in a statement to the North American Newspaper Alliance made public yesterday.

Asked to give his views on the bomb and its effect on national policies, Mr. Hoover said that although the weapon gave America and Britain the power to dictate political policies to the entire world, "no matter how desirable these policies might be we are not going to use it for this purpose."

For International Control

He proposed that the bomb be controlled by international agreement or by control of all uranium ores by the United Nations Security Council. Mr. Hoover's statement follows:

As the secret of the atomic bomb is only the "know-how" of manufacture, the scientists of other nations could make it if they had uranium ore, a billion or so of money and some 2,000 contributing industries at their disposal. All this would take several years and would be even longer if we keep the practical methods of manufacture a secret.

In the meantime it gives the United States and Britain the power to dictate political policies to the whole world if we want to use it. No matter how desirable these policies might be we are not going to use it for this purpose. Therefore, we should consider how we can prevent anyone else from doing it.

This is the most terrible and barbaric weapon that has ever come to the hand of man. Despite any sophistries, its major use is not to kill fighting men, but to kill women, children and civilian men of whole cities as a pressure on governments. If it comes into general use, we may see all civilization destroyed.

A New Approach Needed

The whole subject needs an entirely different approach. Aside from trying to prevent war, what we ought to be doing is to devise methods to prevent nations from using the bomb in any event. In the meantime we ought to keep the secret if for no other reason than to give time to devise methods for its control. Also, possessing the secret gives power in negotiating on the subject.

If we consider methods of control, we have one precedent of some interest. We made international agreements among practically all nations not to use poison gas in war. Those agreements were generally adhered to during this last war. It was about the only agreement that was not seriously violated.

The reason was not the sacred honor of our enemies, not perhaps of ourselves. It was the fear of reprisals upon the first to break the agreement. Such an agreement and such a fear would be no complete guarantee that the atomic bomb would not be used in case of war, but at least it would cause hesitation.

UNO Control of Ores

Another approach might be through control of uranium ores by the Security Council of the United Nations. That idea would be for all nations to agree that any uranium ore in their territory should be placed under the jurisdiction of joint representatives of other nations with resident inspectors in each country possessing such ores.

This, if faithfully carried out, would limit their use to the peaceful arts. In consideration of such an agreement and its faithful adherence, the United States and Great Britain could agree not to use the bomb nor to disclose the method of manufacture.

Certainly the idea that the making of this hideous instrument should be encouraged by giving any other nation or the world the method of its making is the negation of trying to keep it under control in the interest of civilization as a whole.

The establishment of a democratic "world government" as the best means of controlling the atomic bomb was urged yesterday in a letter to President Truman, signed by former Supreme Court Justice Owen J. Roberts and thirty-eight leaders in business, labor, education, religious and literary fields. The letter was released by Federal World Government, Inc., of 29 East Twenty-eighth Street.

DANISH RESEARCHER ON ATOM IS MISSING

NYT 9/28

By Wireless to THE NEW YORK TIMES.

STOCKHOLM, Sweden, Sept. 27—The Aftonbladet will say tomorrow: "Where is Prof. W. Heisenberg?"

One of the closest collaborators of the Danish atom researcher, Niels Bohr, he has disappeared since the German collapse, and the Aftonbladet wonders whether he is in Russia, Britain or America. He called on the German governor in Copenhagen just before the liberation, but nobody in Denmark knows where he has gone.

A colleague here said that Professor Heisenberg might be in Britain. He added that 1,000 liters of "heavy water" that the Germans had manufactured and imported from Norway's Rjukan works had been found by the British in Germany and he believed that Professor Heisenberg had told them where to find it. This was Germany's entire stock of heavy water. Persons who have been trying to find Dr. Heisenberg in the Berlin suburb of Dahlem report that he disappeared well before the collapse.

Three Swedish atom workers are about to sail for the United States to work in Massachusetts. Associates of Prof. Manne Siegbahn, they are Hugo Atterling, Gunnar Lindstroem and Bjoern Aastroem.

ATOM BOMB BASED ON EINSTEIN THEORY

Missile First Practical Use of Theory Developed by Man Whom Nazis Drove Out

ENERGY'S VALUE OUTLINED

9/28 NYT

Tiny Amount Could Supply All U. S. With Electric Power—Scientific Equation Cited

Following is the third of a number of articles by a staff member of THE NEW YORK TIMES *who was detached for service with the War Department at its request to explain the atomic bomb to the lay public. He witnessed the first test of the bomb in New Mexico and, on a flight to Nagasaki, its actual use.*

By WILLIAM L. LAURENCE

Atomic energy, harnessed for the first time by our scientists for use in atomic bombs, is the practically inexhaustible source of power that enables our sun to supply us with heat, light and other forms of radiant energy without which life on earth would not be possible.

It also is the same energy, stored in the nuclei of the atoms of the material universe, that keeps the stars, bodies much larger than our sun, radiating their enormous quantities of light and heat for billions of years, instead of burning themselves out in periods measured only in thousands of years.

The existence of atomic energy first was discovered by Einstein about forty years ago on purely theoretical grounds, as an outgrowth of his famous relativity theory, according to which a body in motion has a greater mass than the same body at rest, this increase in motion bearing a direct relationship to the velocity of light. This meant that the energy of motion imparted an actual increase in mass.

From the formula for the relationship of this increase of mass to the velocity of light Einstein derived his famous mathematical equation that revealed for the first time an equivalence between mass and energy, one of the most revolutionary concepts in the intellectual history of mankind. The mass-energy equation showed that any given quantity of mass was the equivalent of a specific amount of energy, and vice versa.

Energy Highly Concentrated

Specifically this equation revealed the (at that time) incredible fact that very small amounts of matter contained tremendous amounts of energy. A piece of coal the size of a pea, the equation proved, contained enough energy to drive the largest ocean liner across the Atlantic and back. No one, however, least of all Einstein himself, believed at the time that any means ever could be found to tap this cosmic source of elemental energy.

In the mass-energy theorem, Einstein showed the existence of a definite relationship between the Cosmic Trinity of matter, energy and the velocity of light. The relationship is so simple that, once arrived at, a grammar school student could work it out.

In this formula the letter "m" stands for mass in terms of grams; the letter "E" represents energy in terms of ergs (a small unit of energy or work); while the letter "c" stands for the velocity of light in terms of centimeters per second. The energy content of any given quantity of any substance, the formula states, is equal to the mass of the substance (in terms of grams), multiplied by the square of the velocity of light (in terms of centimeters per second). The velocity of light (in round numbers) is 300,000 kilometers, or 30,000,000,000 centimeters, per second.

Take one gram of any substance. According to the Einstein formula the amount of energy ("E") in ergs in this mass is equal to 1 (the mass of the substance in grams) multiplied by 30,000,000,000 squared. In other words, the energy content of one gram of matter equals 900 billion billion ergs. Translated in terms of pounds and kilowatt-hours this means that one pound of matter contains the energy equivalent of 10,000,000,000 kilowatt-hours.

Possible Accomplishments

If this energy could be fully utilized it would take only twenty-two pounds of matter to supply all the electrical power requirements of the United States for a year.

One-third of a gram of water would yield enough heat to turn 1,000 tons of water into steam.

One gram of water would raise a load of a million tons to the top of a mountain six miles high.

A breath of air would operate a powerful airplane continuously for a year.

A handful of snow would heat a large apartment house for a year.

The pasteboard in a small railroad ticket would run a heavy passenger train several times around the world.

A cup of water would supply the power of a great generating station of 100,000-kilowatt capacity for a year.

One pound of any substance, if its atomic energy content could be utilized 100 per cent, is equivalent in power-content to 3,000,000,000 pounds of coal, or 1,500,000 tons. The energy we now are able to utilize in the atomic bombs, at maximum efficiency, constitutes only one-tenth of 1 per cent of the total energy present in the material. But even one-hundredth of 1 per cent still would be the most destructive force by far on this earth.

Atomic energy, released through the splitting of atoms, differs radically from ordinary types of energy hitherto available to man in that it involves annihilation of matter. When an atom is split, part of its matter is converted into energy.

This is materially different from obtaining power by the use of a water wheel, for example, or by the burning of coal or oil. In the case of the water wheel, the water molecules taking part remain entirely unchanged. They simply lose potential energy as they pass from the dam to the tailrace.

Atom's Identity Changes

In the case of burning coal or oil a more intense process takes place, as the atoms of carbon, hydrogen and oxygen (of which the coal and oil molecules are composed) are regrouped by combustion into new molecules forming new substances. The atoms themselves, however, still remain unchanged—they still are carbon, hydrogen and oxygen. None of them, as far as can be measured, loses any part of its mass.

In the case of atomic energy, however, the atom itself completely changes its identity, and in this process of change it loses part of its mass, which is converted into energy. The amount of energy liberated in this process is directly proportional to the amount o atomic mass destroyed. The sun for example, obtains its energy through the partial destruction o its hydrogen, through a complex process in which the hydrogen i converted into helium.

In this process, four hydrogen atoms, each with an atomic mas of 1.008 (total, 4.032 atomic mas units) combine to form one helium atom, which has an atomic mas of 4.003. This represents a loss o mass on the part of the four hydrogen atoms (in addition to a loss of two positive electrons) o 0.029 atomic mass units, which i converted into pure energy. The amount of energy liberated in this process by the enormous quantities of hydrogen in the sun represents an actual loss of the sun's mass at the rate of 4,000,000 tons per second, a mere speck of dus in relation to the sun's total mass of two billion billion billion tons.

If the sun, however, were a mass of coal weighing the same amount it would have to burn 3,000,000,000 times the mass it is burning now to produce the same amount of energy. If that were the case i would have used up the entire store of molecular energy contained in its body of coal in the course of 5,750 years. In other words, it would have burned out long before the earth was born.

Long Life for Earth

By the use of atomic energy the sun has been able to give off its enormous amounts of radiation for a period estimated at 10,000,000,000 years, and its mass, at the present rate of burning, is enough to last 15,000 billion years more, although, of course, the amount of its radiation would be greatly reduced long before that in proportion to the decrease of its mass. Radiations in amounts sufficient to support life on earth are estimated to continue for some 10,000,000,000 to 100,000,000,000 years longer.

Since the very existence of atomic energy was first discovered through the theory of relativity, the development of the atomic bomb constitutes the most dramatic proof so far offered for the correctness of the theory, and also marks the first time it has been put to practical use in mundane affairs.

It is one of the great ironies of history that the German war lords, who drove Einstein into exile, were forced to rely on the theory of relativity in their efforts to develop an atomic bomb to save them from defeat. America, of which Einstein now is an honored citizen, succeeded where the Nazis failed. When the bombs fell over Hiroshima and Nagasaki they represented the fruition of what had been originally a pure mathematical concept.

Had that concept not come when it did, the development of the atomic bomb also might have had to wait. This might have meant a prolongation of the war.

Thousands of young Americans thus may owe their lives to the theory of relativity. Which is another way of saying that pure science, no matter how impractical it may appear, pays high dividends in the end.

VALOR HELD NEED FOR ATOMIC ERA

Mrs. Roosevelt Says We Face Destruction if We Lack Moral and Spiritual Courage

NYT 9/28

Mrs. Franklin D. Roosevelt declared in an address last night that if we have the moral and spiritual courage to face the atomic era, "we will face a golden age," but if we lack such courage, "we will face destruction."

Speaking on "Progress and Freedom," Mrs. Roosevelt addressed an audience of 2,000 persons at the evening session of the third annual forum on "Tomorrow's Challenge" at Christ Church, Park Avenue at Sixtieth Street.

She said that many of the discussions at the forum had emphasized that there could be no freedom where there was fear, and no progress without freedom.

Referring to an earlier talk by Dr. Mordecai W. Johnson, president of Howard University, Washington, she called attention to "the fear in the hearts of people nominally free but not actually free."

Freedom From Fear Urged

The fundamental thing, Mrs. Roosevelt asserted, is freedom from fear and want. After the fear of aggression has been removed, the people seek removal of the fear of want, she added, and in turn fear of want may produce further aggression.

Agreeing with Representative Clare Booth Luce of Connecticut, a former speaker, Mrs. Roosevelt said the same fears could be applied to employer-employe relationships. If the fear were removed, she said, they could sit down together in an atmosphere of good will.

Mrs. Luce, speaking on China, declared that the "forces of peace and happiness have been tapped there" if the nation's 450,000,000 people followed the advice of Generalissimo Chiang Kai-shek, whom she praised highly.

Denouncing the "daily contempt and condescension with which the personality of the Negro has been regarded," Dr. Johnson said that "Southern white people today stand morally defeated in the presence of the Negro."

Norman Thomas, perennial Socialist party candidate for President, terming the atomic bombing of Japan an "atrocity," charged that President Roosevelt had not even bothered to read a Japanese surrender offer that he said had been transmitted through Gen. Douglas MacArthur. In fiery mood, the avowed pacifist assailed the "supposedly liberal criticism of MacArthur" and reiterated the accusation that this Government had received surrender offers months ago, which "showed that Japan was already defeated."

Denouncing this country's use of the atomic bomb, he said "it would be hard to name any single atrocity to match our use of atomic bombs without even warning or previous demonstration of their power."

Asks "National Penitence"

Our Government already had received offers of surrender, he said, "one of which was sent through General MacArthur" and which "President Roosevelt had not even read."

Citing "Secretary Byrnes' own statement," Mr. Thomas declared that the second bomb over Nagasaki, "without waiting to hear the political results of the first, was particularly inexcusable. That fact calls for deep national penitence."

Mr. Thomas' talk on "What America Needs Most" was the highlight of the day's discussions, which included papers by Judge Jonah J. Goldstein, Republican-Liberal-Fusion candidate for Mayor; Mrs. Eugene Meyer of Washington, Lawrence E. Walsh, assistant counsel to Governor Dewey; Mark Starr, educational director of the International Ladies Garment Workers Union, and Herbert D. Williams, superintendent of the New York State Training School for Boys.

Questioned afterward by a reporter, Mr. Thomas said the "surrender story" had been published "many times" and that "it has never been denied." He attributed to the late President the remark: "Mac's a good general, but he's a bad politician."

America needs a program to end unemployment and poverty, and yet keep and increase genuine freedom, he said. It also needs, he added, a foreign policy that makes sense. He remarked that "our Government has been far more successful in winning a war than a peace."

Calling for an "honest willingness to face facts," he declared we cannot lead the world "to the cooperation that peace requires without a humble and a contrite heart."

Emphasizinz the importance of child character building and religious training Judge Goldstein said it was not only the job of the schools but also of the home, the church and the synagogue.

"We, here, have the opportunity, just because we are people drawn from all parts of the globe, to set an example how the world at large can live in peace and harmony," he said. "I think of New York, not as a melting pot, but as a symphony of people in which all participate, according to their different talents and skills."

On the Record

By Dorothy Thompson

NYT 9/28

London and San Francisco

The British press, reporters for American newspapers, and commentators in Russia no longer attempt to conceal the deadlock among the foreign ministers in London. Spokesmen for each country are blaming the others.

At home two schools of thought blame the procedures. One says the meeting was not well prepared; three of the Big Five have new foreign ministers — our own Secretary of State was appointed only just before Potsdam, and returned to reshuffle the State Department without time to study the details of the forthcoming meeting before he was off for London.

There he met Mr. Bevin, who became British Foreign Minister in the last days of the Potsdam conference and was afterward pre-occupied with British-American financial and trade negotiations.

The Chinese Foreign Minister, Mr. Wang, is also new; he succeeded Mr. Soong only in July. This, it can be argued, has increased the influence of the two experienced Foreign Ministers: Mr. Molotov and Mr. Bidault.

Critics therefore say the London Conference should have been preceded by memoranda of experts, exchange of views among lesser officials in the role of experts, with as much agreement as possible among them, and, finally, a meeting of well-prepared foreign ministers after the issues had been thrashed out and the points of dispute clarified.

* * *

Urge Meeting of State Heads

Another school says just the reverse—that there should have been a meeting, not of foreign ministers but among the heads of states: The President, the Prime Minister, and Generalissimo Stalin.

* * *

The first criticism seems well-taken; the second gets us right back where we are. Suppose they had met? Is there any reason to think that they would have found a formula for agreement that the foreign ministers have been unable to find?

As things stand, they would not have found it. For we have been putting the cart before the horse; we have been trying to settle matters like the sovereignty of Trieste, the administration of African colonies, the inland waterways of Europe, handling the picture of peace as though it were a jigsaw puzzle, into which many tiny parts must be fitted, before the players know what the picture is into which the parts must fit.

* * *

Powers Fear New War

More important than any of the discussions going on in London is the discussion that has been going on, with great secrecy, in this country about what to do with the atomic bomb.

What makes it impossible to break the deadlock in London is, not the racial composition of the population of Istria, nor the dispute between collective and individual trusteeship of colonies, and certainly not the composition of the next Danubian River commission, but the fears of the Great Powers of another war. Deadlock in London is due to the inadequacy of San Francisco.

* * *

No Secret Weapon

That would be realized by the whole American people if they knew the facts. They think we have a secret weapon. We have a weapon, but it is not secret. The scientists, who perfected it, are trying to tell the American people, not how to manufacture atomic energy weapons—few of us would understand them if they did—but the great political fact that there is nothing that they know, except for a few minor gadgets, that experienced scientists in other countries do not know, and that the basic matter out of which it is made, uranium, is no monopoly of the Anglo-American powers.

Russia has two known sources at hand: In Czechoslovakia and southern Saxony. Russia certainly—as every geologist admits—has large quantities of it in her huge Eurasian empire. She recognized its significance at least three years ago when she tried to buy it in Canada. Whether she succeeded or failed in Canada, she has certainly set her famous geologists busy to find it in Russia.

The atomic scientists are having to get to the American people through the back door of commentators like myself in order to warn them that the weapon cannot be monopolized under any circumstances, for more than two years. The scientists are advocating international control, by the mutual policing of all atomic laboratories and factories, wherever they may be, fully realizing that this means an obrogation of national sovereignties.

Atomic energy cannot yet be produced in cellars. It requires huge and visible plants that could certainly be controlled. The scientists want atomic energy absolutely barred from the field of weapons and used internationally, to build a great new era in the life of man.

* * *

Great Question Mark

Now, if the Big Three, Four, or Five, had any adequate guarantee and protection that one or another of them would not start blowing up the earth, every single issue in London could be solved. Behind the smallest issue looms this great question mark.

It would therefore be well to forget, for the moment, Italian frontiers and colonies, and reconvene San Francisco, open the conference with a meeting of world scientists, confront the world with the new facts, and make a peace structure which promises peace.

NYT 9/29

THE PROBLEMS OF DEFENSE

Last Sunday on this page we urged the necessity of an exhaustive study of the long-range problems of national defense and the immediate appointment of an able civilian commission to make this study. Developments of the last six days have continued to make apparent the need, and to offer evidence in support of the thesis that an objective approach to the over-all problem hardly can be expected from any presently constituted group, military, civilian or Congressional.

As an example let us take a look at developments in Washington on Thursday. In his first press conference Robert P. Patterson, the new Secretary of War, said that the speed of demobilization depends largely on factors outside the control of the War Department, particularly the replacements that will be available through voluntary enlistment or a continuation of Selective Service. If Congress should abolish Selective Service in the near future, Mr. Patterson warned, many men who already have seen long war service will have to be retained if the United States is to fulfill its occupation duties.

A question that is going to attain more and more prominence, and one which must be faced, is that of universal military training, which Mr. Patterson and Chief of Staff General Marshall already have recommended. This question ought to be studied, not by itself and in the abstract, but in relation to the whole problem of our overseas responsibilities and our national defense.

Again, last Sunday we argued that our present Naval and Military Committees of the House and Senate could not be depended upon to make an objective study, since each generally was partisan to its own service. On Thursday Chairman Vinson of the House Naval Affairs Committee said: "There is no chance of taking up the Army and Navy merger now. I hope it is off forever. The two services should remain separate and distinct." At the same time Chairman May of the House Military Affairs Committee said: "I am against merging the Army and the Navy. I don't think you can merge them."

Before Congress now is a so-called "Red Apple" bill, designed to stimulate voluntary enlistment in the Army by making enlistment periods shorter and pay and retirement more attractive. Now, Senator Walsh, chairman of the Senate Naval Affairs Committee, has introduced legislation to make retirement from the Navy possible after sixteen years. The House Naval Affairs Committee, at the same time, has urged a post-war fleet built around carrier task forces sixteen times greater than was our pre-war Navy.

These are only samples of what we may expect if we continue a haphazard, day-to-day, piecemeal improvisation of our military establishments. What is needed is a comprehensive plan and, more importantly, in view of development of the atomic bomb, a revaluation of present military weapons. A conference of scientists in Chicago is reported to have agreed that there is no present defense against atomic bombs and that none is foreseeable. Not only could we not guard against such an attack, the scientists agreed, we would not even know from whence it came.

Hiram Bingham, the former United States Senator who was a member of the Morrow Board in the Nineteen Twenties, pointed out in a letter to this newspaper yesterday that the recommendations of that board led to developments in military and civil aviation that played an important part in preparing this country for the great air war that has just ended. Far more important problems confront us now than were present after the last war.

Even the less far-reaching decisions to be made are too important to be left in the hands of partisans, no matter how able. They can only be made intelligently and objectively, we believe, by a board such as that headed by the late Dwight Morrow, or its predecessor, the Baker Board. There should not be too long a delay in getting started. A beginning should be made while the mistakes of the last few months and years are still fresh in mind, and before we are loaded down with costly and perhaps obsolete military weapons and procedures that will be harder to dislodge the longer they remain in effect.

ATOMIC FACTORIES INCREDIBLE SIGHT

'Martian' Set-Up Amazes Even Scientists as 'Impossible' Factors Materialize

FIRST 'AMOUNTS' INVISIBLE

With This Elemental Creation of Matter, Energy Can Be Used to Escape Gravity's Bonds

Following is the fourth of a number of articles by a staff member of THE NEW YORK TIMES *who was detached for service with the War Department at its request to explain the atomic bomb to the lay public. He witnessed the first test of the bomb in New Mexico and, on a flight to Nagasaki, its actual use.*

By WILLIAM L. LAURENCE

Those few who, like your correspondent, had the rare privilege of visiting the research laboratories and the mammoth plants in which the work of mastering the atom is being carried on, first blink in amazement and find it difficult to believe the evidence of their senses.

This is true even of the leading scientists who have been intimately connected with the work from the beginning. They frankly admit that they still find themselves constantly amazed when they realize how the truth has outstripped fiction.

Said President James Bryant Conant of Harvard, one of the leading advisers on the atomic bomb project: "They won't believe it when the time comes when this can be told. It is more fantastic than Jules Verne."

"They'll believe if it works," I replied.

The visitor from the outside finds himself in a state of constant amazement, seeing one "impossible" after another materialize before him. He finds himself on a journey through a scientific wonderland. All around him are "such stuff as dreams are made on." To all intents he is a visitor on Mars.

Key Found in 1939

The key to atomic energy was found in 1939, when it was discovered that uranium of atomic weight 235 (U-235), a rare form of the element, could be split and made to yield relatively enormous amounts of energy from the nucleus, or core, of its atoms. The amount of energy thus released is so great that one pound of U-235 is the equivalent of 3,000,000 pounds of coal, 2,000,000 pounds of gasoline or 20,000,000 pounds of TNT.

The catch was that the atoms of U-235, as found in nature, were inextricably mixed with the atoms of ordinary uranium of atomic weight 238 (U-238), the former constituting only seven-tenths of 1 per cent of the mixture. Since both forms of uranium are twins (isotopes), possessing the same chemical properties, they cannot be separated by chemical means, while physical methods for its concentration were, from a practical point of view, non-existent, as it would have taken 1,000 of the then best pieces of apparatus 1,000 years to produce one ounce.

But this "interplanetary" visitor found that in the course of three years our scientists and engineers had built an "Atomland-on-Mars," a scientific Never-Never Land, where the accepted "impossibles" of yesterday were transmuted, by the magic of imagination, concentrated brain-power and will-to-do, under the stimulus of a great national emergency, into actualities of staggering dimensions.

If a Rip Van Winkle had gone to sleep shortly after the first flight of the Wright brothers in 1903 and then had awakened to gaze at a B-29 Superfortress he could not have been more surprised than the visitor to one of the mammoth plants where U-235 is being concentrated in relatively enormous amounts.

Before the war the "amounts" of U-235 that had been concentrated for experimental purposes could not be seen even under the most powerful microscope. The largest "amount" then available weighed less than two-hundredths of a microgram, whereas a dime weighs 2,500,000 micrograms.

Most spectacular of all, our scientists and engineers have contrived, by the greatest miracle of modern alchemy, to create two entirely new elements, neptunium and plutonium, each heavier than uranium, neither of which had been known to exist in nature. Plutonium, occupying No. 94 on the Periodic Table of the Elements, yields atomic energy in amounts equal to uranium 235, the ninety-second and last of the elements found in nature.

Plutonium can be created out of ordinary uranium 238. This is of the utmost significance. For whereas U-235 constitutes only seven-tenths of 1 per cent of nature's uranium supply, the development of means for transmuting the 99.3 per cent of ordinary uranium into plutonium increases the source of atomic energy that can be tapped considerably more than a hundredfold.

There are mammoth plants in "Atomland-on-Mars," situated on a semi-desert site fifteen miles northwest of Pasco, Wash., where plutonium is being produced in relatively enormous quantities. The feeling one gets on visiting these plants is something akin to a strange awareness of the supernatural.

Elemental Creation of Matter

In these Promethean structures, that may well stand as eternal monuments to American genius and enterprise heralding the new Age of Atomic Power, as well as to the Spirit of Man Challenging Nature, mighty cosmic forces are at work such as had never been let loose on this planet in the million years of man's existence on its surface, and probably never in the two billion years of the earth's being.

Here, for the first time in history, man stands in the presence of the very act of elemental creation of matter. Here in the great silences—for the plants operate in a stillness where only the beating of one's heart can be heard—new elements are being born, a phenomenon that, as far as man knows, has not happened since Genesis.

This development no doubt will rank in the future story of mankind as a definite landmark; marking the ushering in of a new cultural age, the Age of Atomics, or the Age of Nucleonics, as some scientists prefer to designate it.

For this there is no parallel in human history. All the great ages in man's past—the Iron Age, the Bronze Age, the ages of steam and electricity—each of which revolutionized man's life on this earth, entered the stage of history imperceptibly, and man did not become aware of them until their effects were fully felt.

This marks the first time in the history of man's struggle to bend the forces of nature to his will that he actually is present at the birth of a new era on this planet, with full awareness of its titanic potentialities for good or evil.

Task of Utilization

In addition to the enormous work of producing U-235 and plutonium in the amounts required there also was the equally gigantic task of utilizing these elements—carrying the most concentrated explosive wallop of any substance on earth—into atomic bombs for bringing the war to the speediest possible end.

The design and construction of the bombs called for the concentration of the most powerful "beam" of collective intelligence ever brought to bear upon any single project. Some of the outstanding minds in this group, such as Prof. Enrico Fermi, Nobel Laureate, of Columbia University; Prof. Eugene Wigner of Princeton, Dr. Leo Szillard and Prof. H. A. Bethe of Cornell, came to us as exiles from Nazi and Fascist fury. One of them, Prof. Niels Bohr, Nobelist and one of the world's greatest scientists, was rescued from German-occupied Denmark in one of the most spectacular single feats of the war.

The site where the research and development laboratory for the bomb is located, at Los Alamos, N. M., was the topmost of all top secrets of the atomic bomb project. Hidden away in the mesas and canyons of New Mexico, twenty-five miles northwest of Santa Fe, overlooked by the majestic Sangre de Cristo mountains that at sunrise and at twilight give the appearance of mountains on fire, this spot is the most "Martian" of all places in "Atomland-on-Mars."

Here the unbelievable meets one everywhere. Here a new species of man, Mesa Man, is laying the foundation of the civilization of tomorrow, if there is to be a tomorrow.

For the power now utilized in a weapon for destruction could also, with the same application of brain-power, will-to-achieve and imagination, be developed for bringing man much nearer to mastery of his material universe. Man has it in his power at last to realize the dream of the ages, for he has found the veritable "Philosopher's Stone" sought in vain by the alchemists, a key to the fountainhead of the very power that keeps the universe going.

Here, among other things, man at last has a fuel powerful enough to free him from the gravitational bonds of the earth.

All existing fuels have only a little more than the energy needed to lift their own weight beyond the earth's gravitational field. Hence no rocket, or space-ship, hitherto could be made that would leave the earth, as no existing fuel has enough power to lift both its own weight as well as the weight of the rocket to a point from which they no longer would be pulled back.

In the atomic bomb, on the other hand, there is more than a million times the energy needed to get beyond the earth's field of gravity. This, therefore, opens the possibility for building a rocket to the moon, or Mars.

Man for the first time has the fuel for such a rocket. He stills lack the engine to utilize this "cosmic fire." While scientists point to enormous obstacles still to be overcome for the propulsion of such a rocket, they do not regard them as basically insurmountable.

The Interplanetary Era may not yet be around the corner, but it already is faintly discernible on the far-off horizon.

Controlling the Atom

NYT 9/30

Debate over control of the atomic bomb, which in the seven weeks since it was first used on Hiroshima has revolutionized war and diplomacy, grew more acute last week. Can the bomb be kept secret? Should the method of producing it be shared with Russia? Or should the formula be turned over to the United Nations for international control? These were the questions on which the debate focused. Last week in Washington, after reports of dissension on the question in the Cabinet, President Truman asserted that he and he alone will decide Government policy on future production of the bomb. That decision, he announced at a press conference, will be dictated by the nation's foreign and domestic policy. He is expected to send a message on the subject to Congress very soon. Meantime, the Senate Foreign Relations Committee started hammering into shape legislation designed to give Congress a voice in fixing atomic bomb policies. Just what program will be followed is not known. These are the various proposals:

Keep the formula secret: Behind this suggestion appear to be (1) fear of Russia, (2) fear that even small nations armed with the bomb could take the aggressive. Advocates of this policy say that the three nations having the secret—the United States, Britain and Canada—have a "moral responsibility" for keeping the peace. Army and Navy strategists also favor this course, arguing that any revelation of the secret should be delayed at least until a defense against the bomb has been found.

Maj. Gen. Leslie R. Groves, who was in charge of the "Manhattan Engineer District," the bomb project, has said the secret should be withheld until nations have demonstrated their anxiety for peace. **President Truman declared on Aug. 9, "The atomic bomb is too dangerous to be loose in a lawless world. That is why Great Britain, Canada and the United States, who have the secret of its production, do not intend to reveal that secret until means have been found to control the bomb so as to protect ourselves and the rest of the world from the danger of total destruction." The following week, former Prime Minister Churchill told the House of Commons: "I am in entire agreement with the President that the secret of the bomb should, so far as possible, not be turned over at the present time to any other country in the world." An unofficial survey of sixty-one Congressmen last week disclosed fifty-five taking the same view.**

For Russia Sharing

Share the formula with Russia: Those who advocate the course argue that other countries "can produce such bombs within a few years without any detailed technical information from us." Therefore, political wisdom dictates, they contend, that Russia, as a main pillar of the peace structure, share the secret and its heavy responsibility. This, they reason, is more than just an idealistic move toward a true world union; it would place Russia under moral obligation never to use the bomb against her war Allies.

Internationalize Control: Under this proposal all atomic research and information would be turned over to the United Nations to avoid competition among nations for the upper hand. Among those in Congress who favor this view is Senator Brien McMahon, Democrat, of Connecticut, who last week proposed that, in exchange, other nations make available to UNO their research on war weapons. Edward R. Stettinius Jr., chief United States representative to UNO, recently declared hat the military staff committee will leal with the use of atomic force and report its recommendations to the Security Council.

ATOM BOMB UPENDS WORLD, BRITON SAYS

Sir John Anderson, Adviser to Attlee, Feels Nations Must Readjust Wisely Soon

9/30

By Wireless to THE NEW YORK TIMES.

LONDON, Sept. 29—The complete readjustment of international relations and the framing of a new order of society are made mandatory by the development of the atomic bomb, Sir John Anderson, chairman of the Advisory Committee on Atomic Energy named by Prime Minister Attlee, said today. A world peopled by men who have atomic energy at their disposal, he added, is bound to be quite a different place from the old world with which we are familiar.

Addressing a victory luncheon of the Caledonian Society here, Sir John said that it was of vital importance that the nations of the world get down to the problem of reshaping international relations without delay.

"If there is delay, incalculable mischief may be done," he said. "There is a real risk of blunders, dangerous and even fatal, being committed in the decisions at which the great nations of the world will have to arrive within the next few months."

Use of the atomic bomb on the "university center" of Hiroshima and Nagasaki, "the cradle of Japan's Christianity," was strongly condemned by Dr. C. M. Chavasse, Anglican Bishop of Rochester, in an article contributed to the current issue of the Rochester Diocesan Chronicle. Recalling that the British people have denounced indiscriminate slaughter in warfare, "from the Abyssinian War down to the present," he asked: "Are we a nation of arch-hypocrites?"

Pointedly asserting that the atomic bomb had blotted out 300,000 noncombatants in the cities of Hiroshima and Nagasaki, he said: "Are we going to hang Germans for doing what we ourselves have done so very much better than they?"

"It may be argued," he concluded, "that circumstances alter cases and that our resort to indiscriminate bombing was justified, seeing that it shortened the war, saved thousands of lives, and was in any case a just retribution for atrocities to prisoners.

"How little we shortened the war by employing the atomic bomb was revealed when, on surrender, it was found that the Japanese had only about one tank of oil left in the country at the end of the war. In any case, a warning demonstration in some obsolete area should have been attempted."

Air Vice Marshal D. C. Bennett painted a grim picture of a future war in which the atom bomb would figure. In an address on the atom bomb and civilization before the London Institute of World Affairs tonight he said a "one-man army" could wipe out every major city of a country under attack by releasing atomic bombs.

Contending that the whole balance of power had been upset by the discovery of the atomic bomb, the Air Vice Marshal maintained that big nations would no longer be powerful because a little country could become great in power merely by bringing about a little improvement of the atomic bomb.

The nations of the world, he concluded, must see to it that the atomic bomb was handed over to an international authority that would use the atomic energy to make life easier.

WORLD OFFER BY U. S. ON ATOMIC AID URGED

NYT 9/30

The American Association for the United Nations, of which Sumner Welles is honorary president, urged yesterday that the United States declare the terms on which it was willing to share control of atomic energy with other countries of the United Nations.

The association declared that there was need for a practical and concrete policy on the part of the Government toward the United Nations Organization and presented a program for immediate action on international problems facing the world organization.

The program recommended that strategic bases occupied by the United States in the Pacific be placed under United Nations trusteeship, proposed adequate relief for the Allies, advocated "ear-marking" of United States contingents for use by the Security Council and called for granting of "adequate power" to the United States delegate on the council.

The association urged also adequate appropriations for the UNO "as an insurance premium against another war."

The group announced plans for "popular education" on a nation-wide scale through branches, young persons, membership drives, publications, speakers and work with other national organizations.

BOMB DECISION NEAR, PATTERSON DECLARES

NYT 9/30

OAK RIDGE, Tenn., Sept. 29 (AP)—Secretary of War Robert P. Patterson said here today that President Truman may be expected "in a short time" to announce his personal opinion on what should be done about the secrets of the atomic bomb.

Responding to a press conference question Mr. Patterson said that "I cannot give the Army's position on proposals to release the atomic bomb secrets, but President Truman will make public his personal decision on the matter in a short time."

If there was one single instrument of war that brought back peace to the world, "it was the [atomic] bomb you built here," Mr. Patterson said in a speech prepared for delivery at Army-Navy "E" award ceremonies.

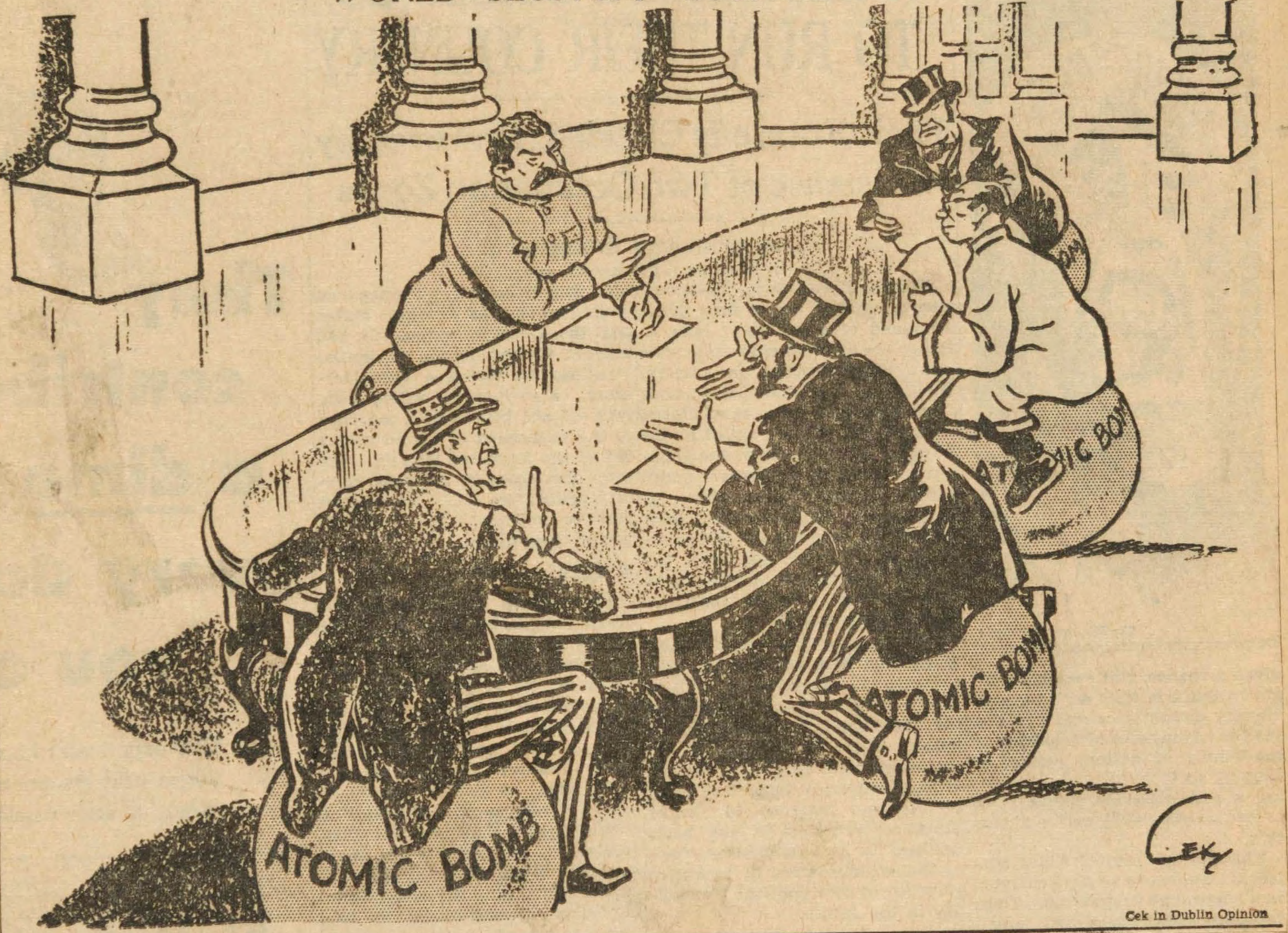
"We would have won without it, but it hastened the day of victory and saved many American lives," he added.

Mr. Patterson was followed by Maj. Gen. Leslie R. Groves, commander of all atomic bomb projects in the nation.

"Never before has anyone mastered such complexities on so large a scale in so short a time and under such pressure," he said. "Maybe I will be accused of overrating American ability, but in answer I point to your accomplishments as my justification."

THE NEW YORK TIMES, SUNDAY, SEPTEMBER 30, 1945.

"WORLD SECURITY COUNCIL SITS"



Cek in Dublin Opinion

Should State Control Research?

The British Broadcasting Company, a Government enterprise, recently organized a debate between J. B. S. Haldane, the distinguished biologist, and Bertrand Russell, the equally distinguished philosopher. The subject was: "Should Scientists Be Public Servants?"

Both men are Socialists, and both agreed at the outset that Great Britain will have to engage in much research if her industry is to be elevated to a higher level, and that much of this research will have to be directed by the state. Russell made a distinction between fundamental research which is not of immediate practical use and "the importance of diversity in direction, leaving opportunities for loopholes and for the exceptionally enlightened person to have an occasion for initiative." Haldane held that all needs can be met "within a framework of research planned from above by various directing bodies." Yet he insisted on democracy and leisure.

Russell was also for democracy but wanted to know what the term meant. "You could have a perfect democracy in a given laboratory if the majority decided what everybody was to do, and that would not satisfy me," he said. "The majority would then be a big Hitler."

Attaining Leisure

Haldane was not impressed by this argument. Technical progress brings about leisure. He cited his distinguished father, a "gas referee," who had to work only two or three days a week, so that he could devote the rest of his leisure to philosophy.

In opposing too much state direction Russell made the point that the scientist is better able to judge what research is necessary than is the general public. Hence scientists must direct Government research. But Haldane was all for direction by "a combination of people," and this because the "pure" scientist, if left to his own devices, "often misses the most interesting problems." He thought that it would do "pure" scientists much good if they spent part of their time in dealing with practical problems.

Lost Liberties

Russell thought that if this were to be achieved, liberties lost in wartime would have to be regained. He maintained that absolute freedom is never possible, but pleaded again for "diversity of direction," so that if one body of scientists saw nothing in a project another might.

Russell emphasized the fact that original research "almost always shocks authority and is therefore often frowned upon." Originality would not have much of a chance to assert itself if there were too much centralized control. Haldane held that this would not be true if a scientist had leisure to engage in spare-time investigation.

Haldane saw no reason why he should not. He cited Dr. Roger Williams, who was once a member of the Bell Laboratories staff here but who isolated vitamin B in his leisure time.

At this point Haldane switched off to plead for more representation of science in government. "I should like to see as many men of science in the Cabinet as there are lawyers today," he said. Though he agreed that planning would be the death of science, he did not see how Great Britain could survive without it. Russell could not see much difference between this point of view and his. Neither can we.

W. K.

Sunday Times,
Aug 5, '45

is likely to be stymied if he has a progressive program.

Fortunately, the Republican Party in California is badly demoralized at the moment. For the last fifteen years two-thirds of the members of the legislature have been elected at the primaries by receiving both party nominations. During the last session party discipline in the Republican ranks broke down completely, with the Republican Speaker of the House telling off Governor Warren on several occasions. In an effort to restore order, Herbert Brownell, G. O. P. national chairman, came to pray with the local functionaries for unity. His visit was not a success. Governor Warren, who has been at outs with the Dewey element since the 1944 election, refused to go along with the movement to tighten the organization. Thus in 1946 the Republicans will not be in a position to make a strong partisan campaign, while, organizationally, the Democratic Party in California is stronger today than in 1942.

Never a dull state politically, California promises to excel past performances in 1946. Out-of-state observers should be reminded of the fact that primary elections will be held in June, 1946, the legislature having advanced the date of the primary by two months.

Everybody's Atom

BY J. D. BERNAL

[Dr. Bernal, one of Britain's leading younger scientists, is professor of physics at Birkbeck College, University of London, and a Fellow of the Royal Society. He is the author of "The Social Function of Science."]

> This revelation of the secrets of Nature, long mercifully withheld from man, should arouse the most solemn reflections in the mind and conscience of every human being capable of comprehension. We must indeed pray that these awful agencies will be made to conduce to peace among the nations and that instead of wreaking measureless havoc upon the entire globe, they may become a perennial fountain of world prosperity.

MR. CHURCHILL'S words, written in the foreknowledge of the effects of the atomic bomb, are echoed in many millions of minds today. People have been quick to see how the actuality of the atomic bomb has implicitly changed the whole existence of man in this universe. The immediate effects, however horrible, have been decisive in ending the war; but the possibilities of further destructive use are in every man's mind and far less certain are the hopes that it may also bring equally untold benefit. These hopes are weak despite official reassurance because, though the people may have little experience of the behavior of atoms, they have considerable experience of the behavior of men, corporately and individually. They remember that in the past science has been fully developed only in human destruction and this gives a poor augury for the beneficent use of these more powerful forces.

President Truman in his broadcast said:

> We must constitute ourselves trustees of this new force, to prevent its misuse and to turn it into the channels of service to mankind. It is an awful responsibility that has come to us.

The exercise of this trusteeship is, however, greater than can be borne by any government or group of governments. It is one that must be shared with the whole of the human race. Good will is not enough. It needs to be backed by an intelligent appreciation of the possibilities that the mastery of atomic energy gives us, and of the ways in which these possibilities can be realized without disrupting our coal- and oil-based civilization.

The perfecting of the atomic bomb is only the first impressive practical utilization of knowledge that appeared almost as startlingly as the bomb itself in the scientific world of fifty years ago. The discoveries of X-rays by Röntgen in 1895, followed by that of radio-activity by Becquerel, were totally unexpected; they broke up the complacent nineteenth-century, determinist, physical picture and started a major revolution in scientific thought. There followed the Rutherford theory of the atom with its heavy nucleus and attendant electron, which showed us a picture of matter very different from our old concrete imaginings; while the quantum theory of Planck and Bohr revealed modes of behavior of that matter even farther removed from common-sense experience. These ideas led to an almost unbroken sequence of discoveries—neutron, positron, meson—culminating just before the war with the splitting of the isotope of uranium which is the basis for the atomic bomb. The bomb itself is, therefore, the first large-scale, practical result of fifty years of intense, fundamental scientific activity.

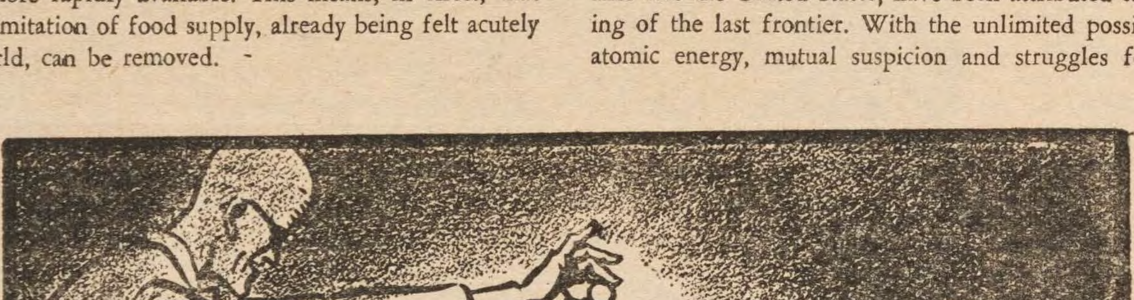
What the effect of the use of atomic energy is likely to be on society, we can now only dimly see. Those who know most about it are prohibited by military secrecy from making any statement. I can write about it only because it is work in which I have at no time been involved. What is important now, however, is not an accurate presentation of the immediate, technical possibilities of the utilization of processes in atomic nuclei but rather an appreciation of the social effects which such utilization is bound to produce. The first obvious and incontestable fact is that we have here a concentration of energy of the order of a million times greater than any we have had before. That does not mean, of course, that we have as yet actually increased the available energy in this planet by any perceptible amount. The rarity of the original elements, the practical difficulties of extraction of the active isotopes, and the unavoidable inefficiency of the disintegration process, may make the effective cost per energy unit for many years far greater than that of the more prosaic sources, coal and oil. We may feel reasonably sure, however, that the application of scientific analysis and practical ingenuity will overcome these difficulties in the course of a few years —if the effort which produced the atomic bomb is maintained at the same intensity.

Long before this time, however, there are obvious fields of utilization for costly but concentrated sources of energy. Such sources would obviously be at a premium in all remote parts of the world where the cost of transporting coal or oil is great and it is there that the use of atomic power will first be economic. It does not follow, however, that the best application of atomic energy is its tranformation into mechanical power. Before this is achieved, we may be utilizing atomic energy for the production of extremely high temperatures and pressures: for a new metallurgy and ceramics, and in large-scale engineering as a super blasting agent. Already, in the availability of an enormous variety of radio-active elements in hitherto unthinkable quantities, we have means for the rapid increase of our chemical, biological, and medical knowledge.

Sooner or later, however, it will be possible to use atomic power economically to provide directly or indirectly for immediate human wants. In the crudest way, such energy could be used to pump water and make fertilizer, extending and intensifying agricultural exploitation. At the same time, by increasing the facility of transport, it can make agricultural products more rapidly available. This means, in effect, that the basic limitation of food supply, already being felt acutely in the world, can be removed.

The discovery of a new source of wealth does not imply its rapid, large-scale use. Columbus's landfall did not mean any immediate increase in the resources of medieval Europe, but it did open a new world, and, in time, that new world with its ever widening frontiers brought an overwhelming increase in human population and standards of living. The development of the atomic bomb is a signal that another new frontier has opened, a frontier more illimitable than the physical frontier of mountain and prairie because it is not tied down to the geographical limitations of this globe but only to the capacities of human intelligence and human ability to cooperate.

Just as, when the new world was opened, the more adventurous could not be content with the constraints and resignations of the old, so, from now on, men will have a reasonable impatience at being tied down by the physical limitations of older methods of production and will demand the most rapid and the most effective development and exploitation of the new powers that science has put into our hands. It is here that lies the way out of the very real horror and apprehension that the atomic bomb has created. Attempts to control this force by secrecy and limitation are foredoomed to failure. The real way to insure freedom from fear and suspicion is not negative restraints but rapid expansion. Many of the troubles of our time, particularly in advanced countries like the United States, have been attributed to the closing of the last frontier. With the unlimited possibilities of atomic energy, mutual suspicion and struggles for *lebens-*



"BABY PLAY WITH NICE BALL?"

(Copyright in All Countries)

mum can give way to a new, universal constructive effort full of excitement, uncertainty, hope, and promise.

The analogy of the opening of the New World, however, must not be pushed too far. What America gave us was something that people were already acquainted with—lands, forests, mines—only more of them than they had ever dreamed of; our new resources are not in the physical world but come from the systematic and cumulative tradition of science, and their benefits can be realized only by ordered and controlled progress, not by a further extension of individual and uncoordinated enterprise.

Perhaps as impressive as the atomic bomb itself is the feat of scientific organization and industrial production that made it possible in three years to go from what was a laboratory experiment involving hardly more than home-made apparatus and sub-microscopic quantities of substance, to a practical release of energy on a scale thousand of times greater than ever before achieved. Social discoveries are intrinsically more important than physical ones. A new way of doing things has an indefinite future not tied to any particular field of knowledge. The overriding need to avoid a fate similar to that we have inflicted on our enemy has shown what many scientists have long believed: that the potentials of modern science were not being realized for the simple reason that insufficient effort was being put into science. From now on this fact is as inescapable as the splitting of the atom itself.

People had grown so accustomed to the multiplicity of ways in which science was affecting modern life that the majority, including many scientists, were content with the relatively small-scale and haphazard manner in which scientific research was conducted and applied. That method, or lack of method, is now dead. The object lesson of the two-billion-dollar expenditure on the atomic bomb, with its integration of scientific, industrial, and military organizations, shows what can be achieved if such projects are tackled in a big way. There are hundreds of projects in science, already known to be realizable theoretically, much less spectacular but of importance comparable to that of the atomic bomb. We have had one example of them already in this war; the development of penicillin, which has saved many times more lives than the atomic bomb has destroyed, or, we hope, will ever destroy. Here again the normal development of fifty years was condensed into two by turning on an adequate effort. The problem of protein structure, with its relation to agriculture, food, and disease; the problem of the control of genetics, with the production of new and useful species; and the great physiological, psychological problem of the relation of body and mind—all these should be tackled by international team-work.

As long as people were content with the pre-uranic scientific progress, that is, as long as people were content with what they knew, the few imaginative scientists who saw the possibilities of the serious and adequate utilization of science could get no hearing. Now that everybody has seen what the pace can be, they are not going to be content any longer with leaving the realization of scientific benefits to their grandchildren or great-grandchildren when they could enjoy them in their own lives. The new era of the atom will also be the era in which the pursuit and application of science will become a major instead of an exceptional human occupation. Put concretely, before the war, between one-tenth and one-third of 1 per cent of the national income of modern industrial states was devoted to scientific research. The war has raised this figure to more than 1 per cent, but a rational appreciation of the newly revealed possibilities of science cannot be content with such a limit. The figure must rise year by year until it reaches stability at some value that we cannot now assess, but may within our own lifetime reach as much as 20 per cent. This implies the recasting of the educational system so as to produce many times the number of scientific workers and at the same time give every citizen enough scientific knowledge to appreciate the problems of the new age.

A mere increase of scientific activity, however, is not enough; it must be coordinated and directed to really worthy tasks. The objectives of science—"what needs to be done"—are set by the conditions of society. Sometimes perverse conditions, such as war, require superior methods of destruction, but normally the aim of science should be to enable individual men to realize their inherent possibilities, whether expressed in art, in science, or in simple human relations. The basic requirements of food, shelter, and work must first be met for the present population of the world and for its future increase. How such general directives can be translated into scientific research is a task for the scientists themselves. It needs to be organized—and organized on a world-wide basis. Science cannot be done in holes and corners. Only a combination of the scientists of all the countries of the world, freely interchanging their ideas and persons, can provide sufficient mutual stimulation to insure a full growth of science. The development of the atom bomb itself required the massed leadership in physics of Britain and America, with contributions from Denmark and from anti-Nazi Germans. German and Japanese science, after its perversion by fascism, was not up to the task. Success was achieved by working to a precise and narrow end, but for the general advancement and benefit of mankind the ends are multiple and indefinite.

It often takes much greater ingenuity to find out what problems have to be solved than actually to solve them once they have been stated. Even now we can see only a very small fraction of the possible applications of atomic energy. These applications must not be attacked in a haphazard way. Just as in war we had our priorities, so we must have them in peace. The jobs that atomic energy can do immediately are probably gigantic enterprises in remote places. Its use, therefore, must be concentrated where such action is likely to give the greatest human return, irrespective of national or individual interests. For example, even now the explosive force of the atom can be used to dig canals, to break open mountain chains, to melt ice barriers, and generally to tidy up the awkward parts of the world.

The control of atomic energy, however, which is already promised by President Truman, should be from the start a fully international control, under the guidance in the first place of the United Nations. The maintaining of secrecy on the principles and processes involved and the limitation of their application to the use of particular nations will be doubly disastrous, partly in slowing down the rate of useful progress, but, far more seriously, in withholding the utilization of atomic energy on account of mutual suspicion. It was possible to develop the atom bomb in secrecy but under a cloak so wide that it covered hundreds of the most brilliant physicists, chemists, and engineers of America and Europe. Far more scientists would have to be brought in for the wider peace-time uses. New and valuable ideas from outside cannot appear effectively under conditions of secrecy. Science needs the widest range of free discussion to develop fruitfully. Sir Henry Dale, president of the Royal Society, has made an impassioned plea for open dealing:

> I believe that the abandonment of any national claim to secrecy about scientific discoveries must be a prerequisite for any kind of international control, such as will obviously be indispensable if we are to use atomic energy to its full value and avoid the final disaster which its misuse might bring.

It is clear that publication and control are indissolubly linked. If we have control without publication, we shall have permanent suspicion and resultant stifling of scientific initiative through secrecy. Such a policy will actually tie up the active sources of energy, which will be kept for war purposes instead of used as fast as they are made. Leading scientists in the world have already recognized this. Sir James Chadwick has said:

> The fundamental principles involved in the atom bomb are so widely known that it is only a matter of time before every country, even without learning the British and United States secrets, develops a similar bomb. I do not think there is any safety in every country having it, but some effort should be made to control its use.

The responsibility is heavy. It must be widely borne. The democratic countries have finished their first task of liberating all countries from domination by reactionary forces. The people of these countries and of the rest of the world must see to it that they do not again pass under a domination of fear created by the very weapons that gave them mastery. They will need all their intelligence and political wisdom from now on to conquer themselves.

Life in a Vacuum

BY PHILIP JORDAN

Germany, British Zone, August 13

TO LIVE in Germany today is to live in "Cloud-Cuckoo Land." It is remote, by a paradox, infinitely stable, and is separated from the normal activities of men and the currents of history by immense gulfs, wide, deep, and spiritually impassable. In the last week mankind has crossed a frontier at whose barriers he has been knocking since the Renaissance first awoke him from a sleep that had lasted several centuries: he has discovered how to harness the powers of atomic fission for his own purposes. On a plane infinitely lower, the Japanese Government has all but surrendered, and for the first time in—how many years is it?—thirty or more, the guns are about to be silenced all over the globe.

You would hardly guess at those facts if you were here in Germany. They have made no more impact on German life than the frail clouds which are moving slowly across the summer sky today. On those who garrison this section of the country the impact is hardly stronger. It is strangely ironic that one of the reasons for the indifference of the latter is due to our present inability to harness illimitable power for other than destructive purposes: we are still as much at the mercy of the weather as we were before the airplane was invented. Here we have had no newspapers to read since the day before the Soviet Union declared war on Japan; and because we have learned to rely on the airplane and have now been betrayed by it, we are as much cut off from our only satisfying sources of information—the newspapers from home—as were our forefathers, in similar appalling weather, in the days before the railroad was invented.

Radio? Yes, somewhere there is a radio, but until today a prolonged series of electric storms has interfered with reception; and when we do manage to turn it on we hear little more than the ineffable voice of Luxembourg, telling the Germans that they are guilty, in much the same voice that a superior, genteel nursemaid uses when reproving some recalcitrant child for stealing jam from the larder.

Not that the Germans are inclined to stick their fingers into the forbidden jam at the moment, but their disinclination to listen to nurse is as convinced and certain as that of the child forced to receive a rebuke which he believes to be neither just nor relevant. It is natural to like jam; and if you are not old enough to have a moral sense, you don't listen to pious homilies on the sin of theft.

But the Germans have an additional reason for disregarding this stern, but, alas, amateur, voice: they are concerned now with satisfying a desire older even than that for glory, older than that for power or self-indulgence, a little older than that to reproduce your species: they are concerned with the problem of their collective stomach. Nothing else matters. They dress up, they go to concerts, they flirt, they read the poverty-stricken little news-sheets we allow them, but they talk of food, endlessly, distressingly. Atomic bombs, the end of "honorary Aryanism," peace on earth to men of good will and all that, these are phantoms for the delight of children, phrases with which the practical mind has no concern at the moment. You can have all the atomic bombs you like, they seem to say, provided that little Hansel and little Gretel can be guaranteed a cup of milk every morning and a slice of good bread several times a day.

Well, of course, little Hansel and Gretel can be guaranteed nothing of the sort. Montgomery, a fine fighting soldier but one who must still prove himself as an administrator, makes their flesh creep with hints of famine this winter, now so close; and he exhorts them to help themselves. They hear that their harvest is good, but they know better. They

AMERICAN BROADCASTING COMPANY

8:30 p.m., E.W.T., September 20, 1945

Town Meeting

Bulletin OF AMERICA'S
TOWN MEETING OF THE AIR
Sponsored by THE READER'S DIGEST

Who Should Control the Atomic Bomb?

Moderator, **GEORGE V. DENNY, JR.**

Speakers

RAYMOND SWING
HANSON BALDWIN
OWEN BREWSTER
EDWARD R. MURROW

(See also page 12)

COMING OCTOBER 4th

Is the Full Employment Bill a Threat to Private Industry?

TUNE IN EVERY THURSDAY, AMERICAN BROADCASTING COMPANY—8:30 p.m., E.W.T.

Volume 11 Number 21

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SEPTEMBER 20, 1945

VOLUME 11, No. 21

Town Meeting

Bulletin of America's Town Meeting of the Air ★ George V. Denny, Jr., Moderator

Who Should Control the Atomic Bomb?

Announcer:

The Reader's Digest, America's most widely read magazine, welcomes you to another stirring session of America's Town Meeting, the program that gives you both sides of issues affecting your life and mine. Tonight, back home at Town Hall in New York City, four authorities clash over an issue that may decide your safety and the preservation of our civilization. Now to open this important session, *The Reader's Digest* brings you the president of Town Hall, founder and moderator of America's Town Meeting, Mr. George V. Denny, Jr. Mr. Denny. *(Applause.)*

Moderator Denny:

Good evening, neighbors. Look at that hand of yours. No, I'm not joking. This is serious business. Are you looking at it? It's the most powerful hand in all of human history. The cave man found that he could increase its power with the aid of a club—the kind of thing the Irish call a shillelagh. Later, man began to use spears and other pointed weapons. Then he found he could increase his power tremendously by throwing a stone with a slingshot. Remember how David killed Goliath?

It wasn't until the fourteenth century, however, that man learned how to hurl missiles at his enemies with the aid of gunpowder. But he had to use his hands and a weapon in the process. As the human hand has become more powerful, it's become more destructive.

Let's not forget that it was a human hand, the hand of Major Tom Ferebee of North Carolina, that dropped the first atomic bomb on Hiroshima and wiped out a city of 126,000 people at one blow.

Yes, that's the most powerful hand in all of human history. It was through the integrity of men of science, searching for truth, using their brains honestly, that we found out how to magnify the power of the hand so tremendously, for the hand is the faithful servant of the brain that directs it.

Now the question is, can we apply our minds with equal honesty in determining how to use this power? It'll take the best and most courageous thinking on the part of each one of us if we are to prevent this gigantic power, now in the human hand, from being used to enslave or destroy us. So we've asked four thoughtful men of wide influence to lead our discussion this evening—a United States Senator, the Honorable Owen Brewster of the State of Maine; the military editor of the *New York Times,* Mr. Hanson Baldwin, and two distinguished news analysts, Raymond Swing, who's heard regularly over most of these stations at 7:15, Eastern Peace Time, and Edward R. Murrow, who only last Thursday returned to this country from his post in Europe where he's the European representative of the Columbia Broadcasting System.

Now we're going to hear first from this man whose voice customarily begins, "This is London." But, no, this is New York and this is Ed Murrow speaking. Ed Murrow. *(Applause.)*

Mr. Murrow:

A few weeks ago I was walking through the ruins of Berlin—the cinders of a civilization. Any one who has seen the damage done by a bombing in the pre-atomic age must recognize that humans have now developed a method of destroying humanity. Perhaps that's unimportant, but at least it's worth mentioning.

I do not believe that this discussion is really about the atomic bomb. It is about the control of aggressor nations.

The atom bomb is an offensive weapon. We, in this country, are at something of a disadvantage when it comes to discussing its control, for we have not been bombed, even by old-fashioned, obsolete methods. Nothing is better calculated to lend urgency to a discussion of the control of bombing than a few near misses. I have not yet discovered anyone who can draw a moral distinction between a whole lot of little bombs and one big one.

We did not, in my opinion, lose the moral leadership of the world when we engaged in area bombing in Europe or when we used the atom bomb.

The whole purpose of bombing is to destroy the enemy's will to resist and his ability to resist. That is an understandable military objective, and it involves the killing and wounding of a lot of civilians, whatever kind of bomb is employed.

I would like to suggest that we make certain assumptions regarding the control of the atomic bomb. The first is that since the bomb has been used, it will be used, if there is another war. The second assumption is that whatever precautions we may take, this weapon will, with immeasurable time, be available to other nations. Research, and perhaps espionage, will make it available to them.

We cannot retain control of this bomb, not even with Senator Brewster's help. If we attempt to do so, even for a short span of years, we shall face the prospect of anonymous annihilation. We may be persuaded that no American government would ever abuse this terrifying power; that it would only be used in the defense of righteousness and justice. Other nations will not share that view, and they will make every effort to produce the bomb and they will succeed.

At this moment, our representatives engaged in negotiations may enjoy a temporary advantage, because everyone knows they have that bomb in their pocket. But the time will surely come when other negotiators sitting around the table will also have a pocketful.

The real problem that confronts us is this—what are we prepared to do to avoid the necessity of having to use this bomb again and to prevent its being used against us?

The great powers must sacrifice their right of veto in the United Nations Organization. That represents a great sacrifice of sovereignty. It can be argued that the existing international organization has not the authority to exercise control over the atomic bomb, I agree. But the bomb, like the bomber on the battleship, is an instrument of national policy. We cannot reduce the power of the bomb or put it back into the brilliant minds from which it came.

We cannot keep it secret, therefore, we must, for our very lives, strengthen the Security Council. It would not involve common citizenship, common currency, language, or the free movement of populations. It would not mean that a lot of foreigners would be telling us how to run our country. It would mean that in our relations with other nations we would submit to the decisions of a representative international body. We would give up our freedom of action when it comes to making war.

We now have an opportunity, perhaps only a fleeting one, to provide the world with a leadership for which it is longing. The atom bomb has not altered the fundamental problem. It has merely lent new urgency, jarred some of us, though perhaps not Senator Brewster, into a realization that a continuation of complete sovereignty is not compatible with the survival of civilization.

I do not advocate the immediate broadcasting of the details of the bomb's construction, although that would probably have no fatal consequences. But I do say that we are now in a position to summon the nations for urgent reconsideration of the sacrifices they are prepared to make to prevent the future use of this weapon.

I have not seen the results of the atom bomb, but have had some personal experience of bombing and being bombed by methods that are now obsolete.

We, in this country, have mercifully been spared that experience. Those who had it, are inclined to believe that no sacrifice is too great if it will prevent a repetition on a more massive scale.

This is a great nation. I have seen its power thrown around the world. But we must live with the world; we cannot dominate it. Other nations are already at work on the development of this weapon. They have the resources.

Think what our action would be if another nation had this secret and we had not. The competition is already beginning. If it continues, no one can win it. We are faced with an opportunity which may not recur, and if we fail, retribution will not limp. *(Applause.)*

Moderator Denny:

Thank you, Ed Murrow. Now you certainly have needled our next speaker, Ed. But I expect he's going to give you about as good as you've sent. He is a member of the Naval Affairs Committee in the United States Senate and also one of the newly-appointed members of the Pearl Harbor Investigating Committee. I take pleasure in presenting to you the Honorable Owen Brewster, Senator from the State of Maine. Senator Brewster. *(Applause.)*

Senator Brewster:

I think I ought to wear a placard, "UNFAIR TO THE SENATE," in putting me in competition with one of the most persuasive and best-loved voices upon the air.

I quite agree with Mr. Murrow that the atomic bomb has opened the Pandora's box, but I do not agree, if I may mix my metaphors, that we should jump out of the frying pan of our present predicament into the fire of sacrificing our sovereignty to some superstate.

I might agree that we have the "bear by the tail," but are not prepared to let him go without knowing where he is going to go, because up in Maine we are rather cautious about bears. *(Laughter.)*

In New England the classic story concerns the Secretary of the Navy, from a typical prairie state, visiting the Brooklyn Navy Yard for the first time, and on boarding a ship, exclaiming in supposed amazement, "Why, the darn thing is hollow!" *(Laughter.)*

It is with somewhat similar innocence and humility that one approaches the atomic bomb. Jules Verne is a piker before the implications of this Frankenstein.

A responsible scientist pictures an innocent-appearing suitcase in a hotel room here at Broadway and 42nd Street, under the impulsion of a radio wave from anywhere you please, suddenly accomplishing the disintegration of this great city in which we meet with all its millions of inhabitants. Even your present dynamic Mayor LaGuardia might be helpless before such a force. *(Laughter.)*

This discussion assumes the present head start of the United States in this discovery, and priority in its development and control, and also in counter measures for protection against its destructive possibilities.

The United States might well rest its claim upon the right of conquest, exactly as the continents have belonged, under international law, to those who first established possession. The United States, however, may much more appropriately in this day and generation rest its claim not merely upon the right of discovery, but upon the far more solemn ground of the pledge by President Truman, to use this elemental force of nature only for the welfare of mankind.

As humanity emerges by slow degrees from the jungle, America stands out as a "trustee" in this century of potential "Peace On Earth"—with American industrial might reaching culmination in the creation of the atomic bomb.

Cynics may compare this concept of America to the "Kultur of the Kaiser" and the delusion of a master race. But the reality remains that peace-loving people everywhere look to America for the salvation of the world from the dread forces of destruction that so recently threatened disaster to all alike.

Without disparagement of our great Allies and their tremendous contribution to our common cause, it is yet evident and generally agreed that the unique geographical location of the United States, plus our vast industrial development, made the indispensable contribution to the total victory we have achieved. *(Applause.)*

The continuing cultivation of our unique resources is equally essential to keep the victory won. We have created a $2,000,000,000 dynamo. We have developed a winning team of scientists. The momentum of this machine must not be lost as we move from the muskets of 1776 to the modern machine gun in the development of atomic energy.

Without blinking our eyes at certain blemishes in our past, no great nation on earth has a better record of peaceful development to justify a custodianship of this developing device for the good of all mankind. This is not nationalistic drivel, but simple fact.

This challenges in no way the historic development of other great nations, but recognizes rather the unique opportunity afforded us in this hemisphere for a comparatively peaceful expansion until we have made of this continent the productive model, and less happily, perhaps, the envy of all the earth.

I am not afraid of a "Pax Americana," with the emphasis on the "pax." Pending the maturing of a world organization and the demonstration of its capacity to conserve the peace, no consideration can properly be given to turning over this perhaps priceless secret to any other group since this discovery may spell life or death, not only for America, but for civilization itself, as it has been slowly and painfully evolved upon this earth by the sacrifices of the generations who have left to us this priceless heritage. *(Applause.)*

Moderator Denny:

Thank you, Senator Brewster. Now we hear the familiar voice of another distinguished commentator, the chairman of the Council for Democracy and the celebrated American Broadcasting Company news analyst, Raymond Swing, speaking to us from Washington. Mr. Swing. *(Applause.)*

Mr. Swing:

I shall start with a word about the theme that the United States lost its moral leadership in using the atomic bomb in the war. My gifted friend Ed Murrow thinks not. He sees no moral difference between killing civilians on a vast scale and killing them on a scale not so vast. I think he's right.

But, right or wrong, few, I believe, can deny that we can forfeit the moral leadership of the world by the way we handle the atomic bomb from now on. At present we say, and Senator Brewster has said it tonight, that we're keeping the secret of the bomb to ourselves as trustees in the cause of peace.

Now that word "trustees" is most carelessly used in this context. A trustee is someone appointed to hold something belonging to someone else and to administer it for someone else, being responsible for his administration to the authority who appointed him. A person can't be self-appointed as trustee responsible only to himself.

We may have the best of intentions, but we're not trustees, and to say that we are hides from ourselves, though not from anyone else, that we are thinking of our own safety. We think we shall not endanger other countries, and we shall be much safer if we keep other countries from having the atomic bomb.

If this belief of ours were shared by other countries — other than Britain and Canada, who are supposed to share the secret of the bomb with us—our course would not create fear in the world. It would create a feeling of security.

But in the nature of things, the other countries will feel weaker and will try to make themselves stronger, first, by finding the secret of the bomb themselves, which all countries with scientific equipment are doing just as fast as they know how, or by making other terrible weapons, or by combining against us, or as it's called—counterbalancing us.

So the exclusive possession of the secret of the bomb is an inducement to rivalry and the stimulant of fear. Whatever we say about promoting the peace of the world, we're not promoting world peace, but the "Pax Americana," a peace which we dominate so long as we are powerful enough to have our way. That is no more moral leadership than a superdreadnaught is moral in overshadowing a cruiser. Nor is it in the American tradition.

It would be in our tradition to take the truly moral leadership, and that we can only do if we lead with a moral principle. Instead of using the atomic secret in a way to inspire fear, we should use it to inspire trust. We should use it to build, not to dismay.

It is my contention that no sovereign nation should have the exclusive or the shared use of the atomic bomb *(applause)*, for all sovereign nations are potential rivals and in a world of unlimited sovereignty, war cannot be abolished. So long as the possibility of war exists, the possibility exists that a large part of the human race, and certainly all of civilization will be destroyed by the weapons of the next organized carnage.

So in line with Mr. Murrow's thought, I advocate that we take what would be the greatest step in moral leadership in our history. We should announce our earnest desire to limit our own sovereignty in all matters of security by committing our security to a greatly strengthened United Nations Organization *(applause)* on the condition that the other nations of the world join us and similarly limit their sovereignty.

We should announce that we shall take this earliest step to call a conference to organize the United Nations to exercise this sovereignty, and that if and when it is achieved, we shall turn over to the Council the secret of the bomb with the exclusive right to use it and to use all other weapons of war.

Only by creating such a world government with full authority to maintain security for all nations can mankind hope to avert another war and so to survive the release of atomic energy and the perfection of guided missiles. To propose this would be assuming a moral leadership of grandeur equal to—yes, greater than—our technical, engineering, and scientific leadership. It is the one true hope of survival for ourselves and the civilized world. *(Applause.)*

Moderator Denny:

Thank you, Raymond Swing. Our next speaker is a graduate of Annapolis, served in the Navy for three and a half years, and since that time has been a student of military and naval science. I take pleasure in presenting at this time the military editor of *New York Times,* Mr. Hanson Baldwin. *(Applause.)*

Mr. Baldwin:

It is all very well tonight to talk as Mr. Swing has about what should be done with the atomic bomb. But some of the suggestions that have been advanced since the bombing of Hiroshima are out of this world. They remind me of epitaphs on gravestones and of the wry remark of a man who had just wandered through a cemetery and had read many of those laudatory inscriptions. "I can't help wondering," he said, "where all the sinners are buried." *(Laughter.)*

I can't help stressing, therefore, that blueprints of the millennium are pretty, Mr. Swing, but meaningless. The truth is, of course, that man's progress in the technological and material fields has far outstripped his political and spiritual developments. *(Applause.)*

When we talk about what should be done with the atomic bomb, we ought to keep closely keyed to the reality of what can be done about it within the framework of our present political, economic, educational, and moral developments. There must be certain guideposts, facts, assumptions, and premises to the practical action we can take.

Let me try to outline a few of those:

First, the atomic bomb, though it makes the waging of war far more devastating and horrible than ever before, does not spell the end of man or of civilization. What is to be feared from the atomic bomb is not the annihilation of man but his degradation; not the end of civilization but a reversion to the Dark Ages—the Dark Ages of tyranny and mental and physical poverty.

Second, sooner or later, other great powers will discover the secret of manufacture of the atomic bomb, whether we give it to them or not.

Third, in time the great powers will evolve some system of defense against atomic explosives, even though partial and incomplete.

Fourth, the very potential of the atomic bomb and long distance rockets might be an attraction to unscrupulous men avid for power.

Fifth, it follows that the atomic bomb per se is not necessarily a factor for peace.

Sixth, the problem of control of the atomic bomb cannot be separated from the problem of the development of atomic energy for industrial purposes. If nations are to be allowed to manufacture plutonium and uranium for peacetime use, it would be easy to conceal and difficult to prevent, by any system of international inspection, the final step—the use of plutonium and uranium for war purposes.

Seven, no international organization yet exists to which control of the atomic bomb and atomic energy development could be entrusted. Even when the United Nations Charter has been ratified by the participating nations, the resulting organization will not be of sufficient strength or maturity, as things stand now, to handle the awful responsibility of such power. You do not give a stick of dynamite to a baby.

Technical strength and military power cannot be entrusted to political and economic weakness. *(Applause.)* One need only glance at today's headlines to understand the weakness of the United Nations Organization. It is, plainly, not united. We lend lip service to internationalism but we still think and act in terms of nationalism. Nor can we do otherwise until the peoples of the world through the slow process of education think in international terms.

I fully agree with Mr. Swing that the abandonment of nationalism and the sacrifice of sovereignty is the eventual hope of the world, but I feel very sure that the world is not educated to any such step today.

My conclusion is, therefore, that for the time being the United States must retain control of the secrets of the atomic bomb and of its manufacture. *(Applause.)* I say this in the full knowledge that perhaps in three to five years, maybe more and maybe less, other great powers will discover these secrets whether we give it to them or not. But those years are years which must be wisely used.

Keep control of the atomic bomb at home for the time being, but work immediately to strengthen the United Nations Charter and to make the United Nations Organization a going concern.

Propose the international abolition of conscription and international limitation upon armaments. Abolish the veto power and the Security Council of the United Nations Organization which now make it impossible to prevent great wars.

Propose an international agreement which would outlaw the use of atomic explosives in war except in retaliation.

Broaden the police functions and military strength of the United

THE SPEAKERS' COLUMN

HANSON BALDWIN—Mr. Baldwin has been a newspaperman since 1928 when he became first police reporter and then general assignment reporter for the *Baltimore Sun.* He became associated with the *New York Times* in 1929, and he has been military and naval correspondent for this paper since 1937. Mr. Baldwin was graduated from the United States Naval Academy in 1924. In the same year he was commissioned as an ensign in the United States Navy and then was advanced to the rank of lieutenant (j.g.). He served aboard battleships and a destroyer until 1927. Mr. Baldiwn is author of *The Caissons Roll—A Military Survey of Europe, Admiral Death, What the Citizen Should Know About the Navy,* and *United We Stand!*

EDWARD ROSCOE MURROW — "This is London." These words of Edward R. Murrow have become familiar to regular radio news listeners over the past few years. As head of the European Bureau of the Columbia Broadcasting System, Mr. Murrow continued to send his newscasts at times when bombing threatened to put him off the air.

Mr. Murrow was born in Greensboro, North Carolina, 41 years ago, but he was raised in the Northwest. He worked as compassman and topographer for timber cruisers in Washington State, and was graduated from Washington State College in 1930. After his graduation he served as president of the National Student Federation for two years and during this time spoke at more than 300 American colleges and universities. Much of his polished speaking style was acquired during this period.

From 1932 to 1935, Mr. Murrow was assistant director of the Institute of International Education, an organization financed by the Carnegie and Rockefeller Foundations. Mr. Murrow had charge of the foreign offices. In 1935, he joined the Columbia Broadcasting System to be in charge of talks and educational programs in Europe. In this capacity he traveled widely in Europe arranging broadcasts of folk festivals, important speeches, ceremonies, and the like, and with the outbreak of war became one of the outstanding news broadcasters. Many of his broadcasts were compiled in a book entitled, *This Is London.*

RAYMOND SWING—Blue Nework Commentator Raymond Swing, was born in Cortlandt, New York, in 1887. He attended Oberlin College and Conservatory of Music and has degrees from Oberlin, Olivet, Williams, Muhlenberg, Lafayette, and Harvard. Mr. Swing began a newspaper career in Cleveland and later worked on papers in Orrville, Ohio; Richmond, Indiana; Indianapolis, Indiana, and Cincinnati, Ohio. From 1913 to 1917, he was Berlin correspondent for the *Chicago Daily News.* In 1918, he became an examiner for the War Labor Board but returned to Germany in 1919 to become Berlin correspondent for the *New York Herald.* The foreign service of the *Wall Street Journal* engaged his time from 1922 to 1924. Then he became London correspondent for the *Philadelphia Public Ledger* and the *New York Evening Post,* a position he held until 1934.

From 1934 to 1936, Mr. Swing was a member of the board of editors of *The Nation.* Then he reversed his usual procedure and became New York correspondent for the *London News Chronicle.* In 1935 he became a news commentator on American affairs for the British Broadcasting System, and on foreign affairs for the American School of the Air. For several years he was commentator on foreign affairs for the Mutual Broadcasting System and since 1942 has been with the Blue Network.

Mr. Swing is the author of *Forerunners of American Fascism, How War Came,* and *Preview of History.* He is also a contributor to both English and American magazines.

RALPH OWEN BREWSTER — Republican Senator from Maine, Owen Brewster was born in Dexter, Maine. He received an A.B. degree from Bowdoin College, an LL.B. degree from Harvard, and an LL.D. from the University of Maine. He is a member of the American and Maine bar associations. He has been a member of the Maine House of Representatives (1917-19, 1921-23) and the Maine Senate (1923-25), and was Governor of Maine for two terms (1925-29). As a Republican Representative from Maine, he served in the 74th to 76th United States Congresses (1935-41). Currently, he is a Senator for the term ending 1947.

During World War I, Senator Brewster was a member of the Maine National Guard, advancing to captain and regimental adjutant. He entered the Officers' Training School at Camp Zachary Taylor, and continued there until after the Armistice was signed.

In 1943, he was a member of the committee of five Senators, making a global flight representing the Truman Committee to investigate the war program.

Nations Organization. Set up under its authority an international atomic energy control commission, and then, but not until then, transmit the secret of the atomic bomb to the United Nations.

I submit, ladies and gentlemen, our real problem is not the control of the atomic bomb. It is control of power in itself and of the nature of man. *(Applause.)*

Moderator Denny:

Thank you, Hanson Baldwin. Now will you gentlemen step up here around the microphone, please. We've come to the point where there's got to be a little give and take. Ed Murrow, we haven't heard from you for a long time. Here's your chance to get back at the Senator if you have any words for him.

Mr. Murrow: I was very much impressed by the eloquence of the Senator's remarks—more impressed, perhaps, by his rhetoric than by his logic. *(Laughter and applause.)* I would like to put to him one question. That is, he used the phrase, "If we keep this secret, we will then be in for a period of comparatively peaceful expansion." What is comparative peace? Does that imply only little wars in which we are not engaged at the outset as was the case when this one began? What do you, mean, Senator, by comparative peaceful developments?

Mr. Denny: Senator, your words rise up to haunt you.

Senator Brewster: Well, fortunately, I put it in the past tense and commented on the development of America through a comparatively peaceful expansion as compared with the 2,000 years of wars that have afflicted Europe and presented us with our present mess. Here in America, we have been comparatively peaceful and offered this example to the world. *(Applause.)*

Mr. Denny: Thank you. Mr. Baldwin. Have you a comment?

Mr. Baldwin: As I was saying at the end of my talk, it seems to me that the basic problem is, not the control of the atomic energy, but the control of the spirit of man and of power—national and international power. Such control I think can be exercised only by the heart and by the mind and by the spirit. The job ahead is not only one for governments, but it comes down to you and me, to the school, to the church, and to the home. *(Applause.)*

Mr. Denny: Mr. Swing in Washington should have a comment on that.

Mr. Swing: Yes, I'd like to say something to Hanson Baldwin. He seemed to be chiding me for approaching the millenium very swiftly. During the first part of his talk he didn't get very far toward it and then toward the end he seemed to me to make a fast leap in my direction. He said, let's have an agreement "to outlaw the use of atomic bombs in war except in retaliation."

Now, obviously if there are to be wars, as that implies, even if the veto power is abolished, the bomb is pretty sure to be used and we are pretty sure to lose our civilization along with every other great power. Then you suggest that police functions and military strength of the United Nations be increased. Now these two ideas don't fit, as I see things. If the United Nations can enforce peace, there need be no wars. There need be only police action to enforce the law.

Now why don't you come all the way to my position and let the complete control of aggressive weapons be handed over to a really United Nations Organization for its exclusive use. If it's the spirit of man that you are afraid of, let me assure you the spirit of man in this world today wants peace. *(Applause.)*

Mr. Denny: Hanson, he is a very persuasive talker, isn't he?

Mr. Baldwin: Yes, I know that from old. There are too many "ifs," however, I think in Mr. Swing's declaration. I wonder if he really believes that all the other nations of the world will turn over to United Nations Organization some of their sovereignty. I predicated the final part of my talk upon the assumption that we would not give the atomic bomb to the United Nations until certain conditions had been fulfilled, among them the giving up of some of the sovereignty of other nations as well as the sovereignty of the United States. I think that is a most important element. I doubt if even Mr. Swing believes that that will be accomplished quickly.

Mr. Swing: Well, I also predicated my final gift of the atomic secret to the World Organization on the predication that everyone else gave up their sovereignty in exactly the same way we do. No one else is going to do it unless we take the lead. We have the bomb. We have to inspire the trust.

Mr. Denny: Thank you, Mr. Swing. Mr. Murrow has something to say about sovereignty. I think he ought to get into this point.

Mr. Murrow: Well, it wasn't really something about sovereignty, and I realize that this is not a humorous subject that we are discussing. I did want to report probably the most cynical comment that I have heard on this subject which came from a Scots friend of mine a few weeks ago.

He said, "For years I've been convinced that the pigs would inherit the earth. Now, I'm not so sure there will be any pigs left."

It does come down to whether or not nations are prepared to sacrifice their sovereignty. Hanson Baldwin seems to think that we must wait until we reach a period of perfection. Unless we give a lead, then I think we are doomed. *(Applause.)*

Mr. Denny: Senator Brewster?

Senator Brewster: Well, I don't know about the pigs of which he speaks but the State of Maine contributed 25,000 mice to the New Mexican experiment with the bomb. I haven't heard from the mice yet as to what they think about it.

But Mr. Murrow is departing on a global tour and we shall listen to his voice around the globe, following a trail I took some two years ago. I suspect that when he returns from that tour, after having surveyed the two billion people on this earth who are outside the Anglo-Saxon domain—we are only 10 per cent of it—he's going to believe that, as Mr. Baldwin says, it's going to be quite a long time before we can accomplish this supersovereignty of which our friends so fondly talk.

Mr. Denny: Thank you. Now, gentlemen, we have a great Town Hall audience here which is anxious to get into this discussion, so while you get ready to answer their questions, let's pause briefly for station identification.

Announcer: You are listening to America's Town Meeting, the program that gives both sides of questions vitally important to you, sponsored by the most widely read of all magazines, *The Reader's Digest.*

Tonight, Raymond Swing, Edward R. Murrow, Senator Owen Brewster, and Hanson Baldwin are discussing the topic, "Who Should Control the Atomic Bomb?"

For a complete copy of this discussion, including the question period immediately following, send for the Town Meeting Bulletin. Write to Town Hall, New York 18, New York. Enclose ten cents to cover the cost of printing and mailing. Now here again is Mr. Denny.

QUESTIONS, PLEASE!

Mr. Denny: Now we're ready for the questions from our representative Town Hall audience, and I'll start with a question from the lady in red.

Lady: Mr. Murrow. Don't you think that the fact that the United States has the bomb it will prevent another Pearl Harbor?

Mr. Denny: Don't you think it will prevent another Pearl Harbor now that we have the bomb?

Mr. Murrow: The bomb is an offensive weapon and had we had many of those bombs available at the time of Pearl Harbor, it would not necessarily have prevented that great disaster. The important thing it seems to me to remember is that so long as that bomb is controlled by a single nation, it is an offensive weapon. We shall use it, if we use it, entirely on our own judgment and our own responsibility. That seems to me a responsibility which we should, perhaps, not assume and which will not be willingly or enthusiastically granted to us by other nations. *(Applause.)*

Mr. Denny: Thank you. Is there a question for Mr. Swing?

Man: I address my question to Mr. Swing. Should we turn over the secret of the bomb's manufacture to the United Nations Organization, what can we expect them to do with it? Would it not be far more practical for us to retain our custodianship while the building of a stronger United Nations Organization is continued?

Mr. Swing: He has asked me a question that I have already answered. I have already proposed that we shall keep the bomb until a new organization is built to which we have yielded our sovereignty in matters of security and other nations have done so. But I think that is preferable to giving the secret to an organization which is incomplete. I think while we have the bomb, we also have the means of persuasion. I want it to be used in a way to invite and create trust rather than the way we are using it now which is to create a certain amount of fear and dread.

Mr. Denny: Mr. Swing, I think what the gentleman is driving at is are you in favor of creating the organization first and then turning the bomb over to it or turning the bomb over to the organization now and working toward the development of a stronger world organization?

Mr. Swing: Well, thank you, Mr. Denny. I had already said in my main statement I was in favor of our taking immediate steps to improve the organization and after the organization had been created then to turn the secret over to them. So I agree with him.

Mr. Denny: Yes. That's very good. I just wanted to get that perfectly clear. Now the lady there in the chartreuse dress. Yes?

Lady: My question is to Senator Brewster. How can we hope for a permament peace by retaining this world shaking weapon between two nations?

Senator Brewster: Well, it is my thought that I have more confidence because of the record of America in world history in its use of this vast energy and power for the good of mankind than I have in sharing it with all the nations of the earth, because we'll be unable to discriminate. If we're going to give it to the United Nations, they all get it. And so if any single one in that should ever fall from grace, we would be faced with this problem. This idea is not unique with me as I simply say what President Truman said, "We must constitute ourselves trustees of this new force to prevent its misuse and to turn it into the channels of service to mankind." I think that pledge from America with its history of a century and a half of nonaggression is the greatest assurance the peoples of the world can possibly have. *(Applause.)*

Mr. Denny: Thank you, Senator. The man here?

Man: I address my question to Mr. Baldwin. Mr. Baldwin, I would like to know if the economic production and the financing of the bomb would give the control of the bomb to the United Nations?

Mr. Denny: Mr. Baldwin? Well, I'm afraid I don't understand the import of it either. Let's have him repeat it and see if he can make it a little clearer to us.

Man: I mean that it cost a great deal of money, perhaps two billion dollars, and a great economic and industrial plant to build this bomb. The smaller nations could not spend the money and would not have the development, the economic development, or the factory to make such a bomb. Could we control that bomb in the United Nations League by that manner?

Mr. Baldwin: Well, of course, I think I can talk around your question. It's a tremendous problem. First of all, you've got to have some control over all the deposits of uranium in the world—pitchblende and other things from which uranium is derived. Those are scattered all over the earth. We don't know how much uranium material there is in Russia. We do know there is some in Czechoslovakia, some in Canada, some in the United States, and some in the Belgian Congo.

The United Nations organization would have to take control of that material. It would then have to presume to take over all the factories that we have built, and, literally, all of the industry of America has contributed to this bomb. It's not just the factories that are down in the south and in Oregon. It's the entire industrial nexus of America that has contributed.

So you see that is the giant problem that would be involved in having the United Nations manufacture and control the atomic bomb. It would in a real sense involve a financing problem and a sacrifice of sovereignty by all of the nations of the world.

Mr. Denny: Thank you, Mr. Baldwin. There are a number of distinguished guests here in our hall this evening. One of them is a man who probably knows more about this bomb than anybody else but who can't talk about it. I'm referring to a man who I want to present to this audience and let the radio audience know that he's here. He's the man who took the idea from Mr. Einstein to President Roosevelt back in 1939.

Those of you who follow Raymond Swing's broadcast remember that he told this whole story on his broadcast. I'm speaking of Mr. Alexander Sachs, distinguished American economist who is up there in a box. Mr. Sachs, will you rise? Let us see you. *(Applause.)* Thank you very much, Mr. Sachs. We are sorry that we can't hear from you, but perhaps sometime we can.

Also, there are two distinguished American veterans in the audience. I'm going to ask them to give us a comment question if they care to—a former lieutenant in the infantry, now chairman of the American Veterans' Committee, Mr. Charles Guy Bolté. Mr. Bolté, have you a question? *(Applause.)*

Mr. Bolté: I'd like to ask Mr. Baldwin a question. You say, Mr. Baldwin, that we cannot hope to get any sort of world government until we have educated people to be internationally minded.

If you think back over history, I think you would probably find, as I do in thinking back, that what happened throughout history was that great attempts throughout the various religions, and so on, to raise the standards of human behavior were not always very successful by instilling new moral standards. What did happen was that when police forces were instituted and a code of law was set forth in a nation, the citizens of the nation found they could live with a good deal more safety and security.

Now wouldn't you think that the same thing might hold true in international affairs and that the way to give the atomic bomb to the United Nations is to strengthen the organization so that it can, in fact, enforce the rule of law among the nations of the world? *(Applause.)*

Mr. Baldwin: I have no quarrel with that, Mr. Bolté. Nor have I any quarrel in principle with what either Edward Murrow or Raymond Swing is saying. I think we agree in principle but we differ very definitely and violently as to the time that may be required for this process. I for one will not be cast down or despondent if another war does assail the earth at some future time. I believe that man progresses. I believe that profoundly, but I believe that he progresses slowly, and it's the tendency of Americans in case of such set-backs in civilization to become impatient, to want to see the millenium in a day. I differ there with Mr. Swing; I agree heartily with all that Mr. Bolté has said. I'm all in favor of the United States taking the lead in trying to secure some law internationally. *(Applause.)*

Mr. Denny: Thank you. Mr. Swing, do you want to comment on that?

Mr. Swing: Well, I heard my name being used there again. I just want to suggest that the dismay that Mr. Baldwin thinks he's not going to feel in case there's another war isn't in line with what he, himself, said. He did say earlier that he didn't believe this civilization would be destroyed, but what would happen was that we'd go back to the Dark Ages and man would be degraded. Well, I'll agree with him about that; everybody will. That's all the end of civilization means—the Dark Ages and man's degradation. It seems to me that he would be much more dismayed than he lets on at this present time. We haven't any time. We haven't the secret but for two to five years, and then the question is whether the bomb will be used, not whether we share the secret. One way to make sure that the bomb isn't used is to make sure there aren't wars. *(Applause.)*

Mr. Denny: Thank you. There's another veteran back there in the aisle who was assistant to Commander Stassen at San Francisco, a former lieutenant in the Marine Corps, and author of a lead article in the current *Atlantic,* "A Serviceman Looks at the Peace." He is Mr. Cord Meyer. Mr. Meyer. *(Applause.)*

Mr. Meyer: Senator Brewster, I'd like to ask you a queston. Your argument rests on the assumption that we can indefinitely keep the atomic secret. No scientist who had anything to do with its construction agrees with you. The custodianship idea is good, at best, for a very limited time. What do you propose, Mr. Brewster, when the imminent day comes when our knowledge is universal and everyone shares it—that we sit back and wait pending the maturing of the international organization, as you put it? Is it going to go all by itself, Mr. Brewster? We don't have a long time, Mr. Brewster, to establish government on a world level. To suggest that this government on a world level is impossible for a long time to come is to say, Mr. Brewster, that we are doomed and that there is nothing that we can do about it. *(Applause.)*

Mr. Denny: I'd say that Mr. Cord Meyer is a good candidate for Town Meeting, wouldn't you, Senator?

Senator Brewster: Well, I certainly appreciate his contribution, and, fresh from the last war, even as he is from this, I was Executive Secretary of the League to Enforce Peace in the State of Maine, organized under the leadership of Root, Taft, and others, with this very objective in mind. I have never ceased to labor in every position of power that I have held and in the Congress of the United States, a low and unregenerate Republican from Maine *(laughter)*, I have voted consistently throughout the past ten years for every measure calculated to bring a better understanding among the nations in this great dream of a day of peace.

I am also conscious of the fact that there are many problems in our past. I'm conscious of the fact that we started a little experiment in this, ourselves, a century and a half ago with every hope of success, and yet, at the end of 75 years we fought the bloodiest civil war in all history to determine whether any nation so conceived and so dedicated could endure. So, perhaps, my youthful enthusiasm has been moderated with an observation of years. I recognize what the scientists say, but I recognize, also, that we have a four or five-year head start, that this is not static, but dynamic, that the two billion dollar engine that we have built, that the great team of scientists we have created are not going to stand still, but are going on in the evolution of this mighty weapon that has been born, and that we do have that as a trusteeship pending the day when the time of peace on earth shall really arrive. So I feel that America must recognize, as President Truman said, its trusteeship of this for the good of all mankind. *(Applause.)*

Mr. Denny: Thank you, Senator Brewster. Any comments, Mr. Swing?

Mr. Swing: Yes, I've got a comment or two to make on that. It seems to me that Senator Brewster's impatience with mankind has taken only a few years to mature. He's still a young man and if he believed in peace after the last war, won't he rejoin the peace movement now and work for it in the sense that Mr. Murrow and I want it—that we now create a real security in the world. I want to add this idea, too, that the sovereignty that we are going to give up in this country and other countries are going to give up, isn't a sovereignty that the people lose. It will be the people in the world organization which will really have the sovereignty and who will really do the abolition of war.

Mr. Denny: Mr. Swing's doing a very persuasive job on his opposition tonight—just inviting them over. All right, now, the young sailor back there. Yes?

Sailor: I have a question for Mr. Swing. I would like to know, as long as he puts such a great deal of alliance on this moral persuasion, whether he isn't thinking a little bit of the future more than the present. Where in European history has moral persuasion prevailed against the sword? The United Nations are predominately of European background. Let's go by the record. *(Applause.)*

Mr. Swing: Well, I would say to that that the record shows that Europe set up a League of Nations at the end of the last war in the hope that wars might be stopped by collective action. While it was our idea, it was Europe which accepted it and we did not accept it. Even Europeans are people who don't like killing and don't like being killed. *(Applause.)*

Mr. Denny: Thank you. We can't have a good Town Meeting discussion on this question of an approach to world peace without having our good friend, Ely Culbertson, here, and there he is ready to put Senator Brewster on the spot.

Mr. Culbertson: My name is Ely Culbertson, and, like Senator Brewster, I am trying to build a bridge to peace. But Senator Brewster is not afraid of the atomic bomb. He lives in Maine. *(Laughter.)*

Senator Brewster: Come up and see me sometime.

Mr. Culbertson: We poor human beings—we live right here in New York City—and we are scared to death. Can I therefore ask the Senator to define once and for all exactly and specifically that beautiful little word "sovereignty?"

Mr. Denny: Senator, did you come with a definition of sovereignty in your pocket? *(Laughter.)*

Senator Brewster: Well, I read the Declaration of Independence and to it I still subscribe. I won't repeat it here for this audience but I think it was fairly clear here in New York a good many years ago when we declared our independence for which we have fought several wars.

I think the American people know pretty well what we mean. I think we are quite ready to cooperate with all other peoples in all measures designed to keep the peace. But after the discussions at San Francisco and those now proceeding in London and the proposals that are pending by very potent nations, I think it is evident that the millennium has not yet arrived. I do believe that America is the greatest hope of peace throughout the century that is now ahead. That's why I want to keep our powder dry. *(Applause.)*

Mr. Denny: Mr. Culbertson wants to talk back there.

Mr. Culbertson: Can I ask once and for all, dear Senator, will you define that beautiful word "sovereignty" *(laughter)*—not generalities, but specific? *(Applause.)*

Senator Burton: When in the course of human events it becomes necessary for a people to assert among the nations their proper position, then it is incumbent upon them to state their reasons and America a century and a half ago declared its right to govern itself in a democratic form, and this, as Mr. Murrow just reminded me, is the only place in all the whole wide world where anything like this could now go on. I ask you, are we ready to surrender the sovereignty of this country to the fifteen or twenty different kinds of dictatorships that now dominate the different nations of the earth? *(Shouts of "No" and applause.)*

Mr. Denny: Thank you. Now we'll take this question from the gentleman there in the back. Yes?

Man: I wanted to address one to Raymond Swing, briefly. It is still a policing problem all over the world, and does Mr. Swing consider that Soviet Russia, once she has secured the secret of the atomic bomb—and all the speakers have agreed that eventually all nations will have it—that she will relinquish her insistence upon the veto power and Security Council setup?

Mr. Denny: Mr. Swing?

Mr. Swing: My answer to that is I don't know what the Soviet Union will do. I know that the Soviet Union is a federation and understands the federal principle. I believe the Soviet Union wants security. I'm sure the people of the Soviet Union want peace. At the present time, the Soviet Union sees us in possession of a weapon which we don't give to them, the secret of which we don't share with them. If people in the Soviet Union are now afraid of us and sense our using our power against them, then I think they are only acting as we would act in their place.

If, however, we made it clear to the Soviet Union that we do not oppose them with the atomic bomb, but will share it with the world organization which is to keep the peace for all of us, then I think the Soviet Union, being a federal state, is more likely to come in than not. They won't come in unless we do propose it. *(Applause.)*

Mr. Denny: Thank you, Raymond Swing, Senator Brewster, Ed Murrow, and Hanson Baldwin. It's hard to bring a discussion of this kind to a close and I know that a great many people all over the country, yes, and our men in the armed forces who hear this program in various parts of the world, and hospitals here at home, will carry on their own discussions of this baffling problem. Man is not going to give up readily once he's set out to do something as he's a very tenacious animal. And he's not going to give up readily on next week's topic, which I'll tell you about in just a moment as soon as our announcer tells you a brief, dramatic story of how a wrecked bomber carried a key to greater understanding between the United States and our ally, China.

Announcer: "A Bridge Between Free Peoples," is the title of an article on a recent back cover of *The Reader's Digest.* It's by a Belgian-born priest who has taught in China for more than seven years and is now a naturalized Chinese citizen. He writes:

"While I was visiting a lonely mountain hamlet in northern China, the village barber invited me to occupy his brand new makeshift chair. It was the bombardier's seat of an American B-25. As he trimmed my hair, I heard an amazingly cosmopolitan conversation among the other villagers, none of whom had ever been beyond the nearest hill. One discussed an American farm program. Another spoke of an American patriot, Nathan Hale. A third chuckled over the strange cinema career of Mickey Rooney.

"I expressed my wonder at the extent of their knowledge to the village school teacher, a frosty bearded 80-year-old man who spoke English. His eyes twinkled as he admitted, 'I have been telling them all these things just from memory, you know, from pure memory. But, come, I'd like to take you to see the American flying chariot that was forced down here after dropping bombs over Japan. We like to look at it because it is a symbol, a bridge between our two peoples, and a token of the hopes of freedom loving people of all the world.'

"As we approached the fallen B-25, I saw lying beside it the cover of an old *Reader's Digest.* I read its list of titles, 'They Grow Their Own and Live Better'; 'Portrait of an American'; 'Alias Andy Hardy' — the very subjects that had been discussed by the Chinese villagers. I had found the secret of the remarkable memory of the old teacher. This plane that planted the seeds of death in Tokyo had planted the seeds of knowledge in the mountains of China."

The Reader's Digest is now published in six languages, and is distributed in 53 countries. The editors of *The Reader's Digest* plan to add other foreign editions so that more and more *The Reader's Digest* will become a bridge between free peoples. Now, here again is Mr. Denny.

Mr. Denny: Well, neighbors, we still have some unfinished business with the Japs. Your sons, fathers, brothers helped to win the military victory but it's up to us and our Allies to see that it was not in vain. If this peace should turn out to be only an armistice, what a mockery we should have made of this victory.

So we invite you to join us next week when Brigadier General Carlos Romulo, Resident Commissioner of the Philippine Islands; Wilfred Fleisher, author and commentator; Royal Arch Gunnison, foreign correspondent and news analyst; and a fourth speaker to be announced, discuss the question, "How Can We Make a Lasting Peace With Japan?"

Announcer: Be sure to tune in next week when *The Reader's Digest* brings you Town Meeting. *(Applause.)*

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